The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1761.—Vol. XXXIX. LONDON, SATURDAY, MAY 22, 1869. {STAMPED ... SIXPENCE, UNSTAMPED ..FIVEPENCE

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 1842.)

Mr. CROFTS transacts business in the way of PURCHASE or SALE of every description of stocks, but particularly BRITISH MINES, at net prices. All orders m[illegible] with the utmost punctuality, and advice given as to the nature and eligibi[illegible] of INVESTMENTS when required.

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

GREAT ROYALTON.—Great North Lode: The agent writes:—"This lode, which is the main lode in the mine, I have proved already 350 fathoms in length. I am sinking a new shaft on it and we have rich tin already. The stamps will not a quarter stamp the rich tinstuff from this lode alone. I shall soon have a batch of tin for sale."

These shares should be secured at once whilst they can be had at 20s.

MR. W. H. BUMPUS (late JOHN BUMPUS), STOCK AND SHAREDEALER, 44, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE, the following shares, free of commission:—

50 Anglo-Argent., 23s. 9	15 Frank Mills, £3⅜ (ex div).	50 Princess of Wales, 7s 6
35 Caldbeck Fells, 15s 3d	50 Gen. Brazilian, 14s. 9	50 Royalton, 20s.
20 Chiver. Moor, £3¾.	10 Great Laxey, £19.	100 Rossa Grande, 19s 6d.
50 Chontales, £1⅛.	25 Great No Laxey, 20s 6	50 So. Condurrow, 32s 3d
30 Drake Walls, 18s. 6d.	10 Great Wh. Vor, £16½	100 Sao Vicente, 5s. 3d.
50 Don Pedro, £4 6 3 pm	15 Marke Valley, £8 16 3	100 Taquaril, 10s. 3d.
20 East Lovell, £6⅞.	25 North Crofty, 22s.	5 Wh. Trelawny, £7½.
10 East Caradon, £7½.	5 No. Levant, £9⅛.	25 West Basset, 25s.
50 East Bottle Hill (offer wanted).	20 New Lovell, 38s.	3 Wt. Chiverton, £50.
5 East Basset, £9.	5 Pedn-an-drea, £5.	5 West Caradon, £4¾.
20 East Grenville, £4½.	50 Pestarena, £1 7s. 6d.	50 Wheal Crebor, 11s.
200 Frontino, 16s. 3d.	35 Prince of Wales, 30s.	20 Wheal Uny, £3¾.

MR. WILLIAM WARD,
95, BISHOPSGATE STREET WITHIN, LONDON, E.C.

HOLMBUSH AND KELLY BRAY UNITED MINES, LIMITED (Fully paid).—These mines will shortly be drained by the 70-in. engine. The rich discovery at Kelly Bray is giving monthly profits, which will be greatly increased.

W. W. recommends the immediate purchase of these shares at present prices.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 AND 225, GRESHAM HOUSE,
OLD BROAD STREET, LONDON, E.C.

JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER, 48, THREADNEEDLE STREET, LONDON, E.C.
Bankers: London and Westminster, Lothbury.

MR. Y. CHRISTIAN, STOCK AND SHAREDEALER,
11, ROYAL EXCHANGE, E.C.

POLBREEN.—Attention should be directed to the prospectus of this mine, which will be found in another page. The shares are now at par only, and investors at that price may rely on their having a property that will rapidly rise in value, and will, moreover, early become a dividend-paying mine.
Bankers: Bank of England.

Established Twelve Years.—Twenty-four Years' Experience.

MR. F. W. MANSELL, 44, THREADNEEDLE STREET, LONDON, offers the following shares FOR SALE, free of commission:—

25 Chiverton, £2½.	50 Great Retallack, £2¼	100 Redmoor, 7s. 6d.
50 Carn Camborne, 8s.	10 Great Vor, £16½.	1 So. Caradon, £375.
25 Chiverton Moor, 3¾.	15 Marke Valley, £8¾.	10 So. Herodsfoot, 22s.
45 Drake Walls, 18s.	25 North Crofty, 18s. 6d.	2 South Frances, £16.
3 East Basset, £7½.	50 North Downs, 12s. 6d.	10 St John del Rey, £16¼
15 East Caradon, £7¼.	100 No. Treskerby, 14s.	5 Wt. Chiverton, £50⅜.
30 East Grenville, £4⅜.	1 New Seton, £60.	1 West Seton, £190.
10 East Lovell, £6.	15 New Lovell, £1 16s.	50 West Wh. Kitty, 10s.
500 Frontino, 16s.	75 Prince of Wales, 29s.	10 West Caradon.
50 Great So. Tolgus, 28s.	100 Pestarena, £1⅜.	15 Wh. Mary Ann, £14.
150 Gen. Brazilian, 15s.	100 Rossa Grande, 24s.	50 Worthing, 6s. 6d.

SOUTH CONDURROW and GREAT SOUTH CHIVERTON are recommended for immediate purchase.
Bankers: London Joint-Stock Bank.

MR. JAMES HUME, STOCK AND SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.

BUSINESS transacted in all marketable Shares and Stocks at closest prices, and at 1¼ per cent. margin as commission.

SPECIAL BUSINESS in Don Pedro, Chontales, Frontino, and other gold mines.

WELSH LEAD MINES.—VAN shares have risen to £30, and still rising. GREAT ROCK—shares £5 to £6. These shares will soon be £10, and should be bought. Particulars on application.

Mr. HUME recommends an early application to him for shares in the adjoining company to Van, now constituting. Shares are already £1 to £2 premium. Clients and friends will be supplied on advantageous terms, if an early application is made. Bankers: The London Joint-Stock Bank.

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C.

T. R. has BUSINESS in the following mines, at close market prices:—

Bedford Consols.	East Caradon.	Prince of Wales.
Bedford United.	East Carn Brea.	South Herodsfoot.
Drake Walls.	Frontino and Bolivia.	South Condurrow.
Devon Consols.	Frank Mills.	West Drake Walls.
Don Pedro.	New Lovell.	West Chiverton.
East Grenville.	North Treskerby.	Wheal Chiverton.

T. R. can recommend two mines safe for a great rise this year; parties wishing to know particulars can see the reports at my office from 10 to 4 o'clock, and not only the reports, but the plans and sections of the properties, and have my opinion thereon, as I have inspected and reported upon the mines I recommend several times.

PRINCE OF WALES.—Parties desirous of knowing what to do at present prices should call at my office, and see my agents' reports.

BEDFORD CONSOLS and CHIVERTON MOOR should be bought at present low prices.

CHONTALES.—I am a seller for time on below the present market prices.
Money advanced to any extent on good mining shares.
Office hours Ten to Four. Bankers: Bank of England.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 15 years), has FOR SALE the FOLLOWING SHARES, at net prices:—

50 Anglo-Argen., 4s. pm.	50 Frontino, 16s. 6d.	20 Redmoor, 5s. 6d.
50 Anglo-Brazilian, 7s 3d	20 Great Western, £15⅜.	30 South Merilyn, 19s.
20 Budnick Consols, 30s.	5 Great Laxey, £19½.	10 St. Just Amal., 13s.
25 Chontales, 29s.	50 Gen. Brazilian, 4s 3d. premium.	25 So. Condurrow, 30s.3d
3 Cwm Erfin, £17.		50 So. Grenville, 2s. 6d.
20 Caldbeck Fells, 16s.	25 Gt. No. Laxey, 20s.6d	50 Tamar Valley, 11s. 6d
20 Chiverton, £2½.	5 Great Vor, £16⅜.	5 Tincroft, £17⅞.
15 Chiver. Moor, £3⅜.	3 Maes-y-Safn, £26¼.	100 Tin Hill, 2s.
1 Devon Con., £197½.	20 New Lovell, 36s. 3d.	15 Trevenna, 18s. 6d.
25 Don Pedro, £4 3s. 9d. premium.	10 North Levant, £8¾.	5 Van, £33¼.
	20 North Pool, 14s. 9d.	40 West Basset, 18s. 9d.
40 Drake Walls, 18s. 3d.	40 No. Treskerby, 13s. 6d	50 W. Pr. of Wales, 3s. 9
10 East Caradon, £7 3s 9	25 North Crofty, 17s. 6d.	25 Wheal Agar, 28s. 9d.
25 East Rosewarne, 2s 6	30 Prince of Wales, 29s 3d	25 West Godolphin. 24s 9
15 E. Grenville, £4 11s 3	25 Pestarena, 23s. 9d.	5 Wh. Mary Ann, £14¾
15 East Lovell, £6½.	40 Rossa Grande, 6s. 3d. premium.	1 Wheal Seton, £57¼.
10 Frank Mills, £4⅛.		50 W. St. Ives, 4s. 6d.

BUYER of South Darren.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), is a SELLER at net prices of:—

90 Great South Chiverton, £1 19s. 3d.; 35 Brynpostig, 38s.; 5 Wheal Kitty (St. Agnes), £5 1s. 6d.; 100 Prince of Wales, 27s.; 20 Van, £23¾; 25 North Retallack, £4½; 60 East Grenville, £4 8s. 9d. (ex div); 40 South Merilyn; 30 East Rosewarne, 2s. 6d.; 45 Pedn-an-drea, 5½; 50 West Godolphin, 25s.; 75 Lovell Consols; 60 Crebor, 9s. 9d.; 70 West Drake Walls, 6s. 9d.; 45 Colquite and Callington; 30 Frank Mills, £4; 100 Tin Valley; 100 East Chiverton, 27s. 6d.; 80 Sparnon, 22s. 9d.; 100 South Grenville, 9s.; 15 Rose and Chiverton; 110 New Wheal Prosper; 90 Anglo-Brazilian, 8s. 3d.; 100 General Brazilian, 13s. 9d.; 70 Frontino and Bolivia, 16s. 9d.; 200 Taquaril, 10s. 6d.; 50 Alamillos, 30s. 9d.; 150 Sao Vicente, 5s. 3d.

SPECIAL BUSINESS in 50 Holmbush and Kelly Bray, £4¼; 100 Royalton, 27s. 3d.; and Van.

CORNISH AND FOREIGN MINES—TO SHAREHOLDERS AND OTHERS.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, May 21, No. 533, Vol. XI., price 6d. each copy, forwarded on application, contains information on the following mines:—

Great Rock.	Prosper United.	Van.
Great Wheal Vor.	Wheal Buller.	St. Ives Consols.
West Caradon.	Wheal Trelawny.	East Grenville.
New Wheal Lovell.	Great North Laxey.	Australian United.
Prince of Wales.	Great Western.	

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to *bona fide* investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.
PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON
(three doors only from Hercules-passage, entrance to the Stock Exchange).
Twenty-four years' experience.
(Two in Cornwall and Twenty-two in London.)
Bankers: The Alliance Bank, and the Union Bank of London.
References given and required (when necessary) in all the principal towns of the United Kingdom.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

MR. EDWARD COOKE,
STOCK AND MINING SHAREDEALER, 76, OLD BROAD STREET (and Mining Exchange), LONDON, E.C.
Shares in all dividend and best progressive mines dealt in.
Mr. COOKE has visited the Van and also the Great Rock Mines, and fully inspected them, during the week, and will afford information on same upon application.
References given.
Price-list sent free on application.
Bankers: Alliance Bank.

MR. W. H. CUELL,
No. 42, CORNHILL, LONDON, E.C.

MR. WILLIAM SEWARD, STOCK AND MINING SHARE BROKER, 19, THROGMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market prices.

MATTHEW GREENE, STOCK AND SHAREDEALER,
14, PINNER'S HALL, OLD BROAD STREET, LONDON, E.C.
SPECIAL BUSINESS in Holmbush and Kelly Bray at £4¼, and in Royalton at 25s.

MR. C. A. POWELL, BRITISH AND FOREIGN STOCK AND SHAREDEALER, No. 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.
Business transacted in every description of negociable securities at current market prices, net.
Mr. POWELL has extensive transactions in the principal gold mines, and parties can be dealt with advantageously.
WANTED an offer for 100 St. Just Amalgamated.
BUYER or SELLER at market prices of Brynpostig, Mid-Wales, Prince of Wales, Great Vor, and North Treskerby.
References exchanged.
May 21, 1869. Bankers: City Bank, Finch-lane.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER, No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS in West Godolphin, Summer Hill, North Pool, South Merilyn, New Lovell, East Rosewarne, East Carn Brea, North Treskerby, Wheal Agar, Caldbeck Fells, East New Lovell, Great South Chiverton, South Darren, and Maes-y-Safn shares.
*** SOUTH MERLLYN.—E. J. B. directs special attention to this mine. The results of operations have been the discovery of lead at every point touched upon. At present prices more especially shares should be immediately secured. Reports and plans on application.
Holders of Stock difficult of sale in the open market may find purchasers on application to the above.
BUYER of West Godolphin, North Treskerby, and Caldbeck Fells.

GOVERNMENT AND OTHER SECURITIES BOUGHT AND SOLD, AT NET PRICES, AND FREE OF COMMISSION.

MESSRS. REES AND CO., CROWN CHAMBERS, THREADNEEDLE STREET, LONDON, E.C., are DEALERS, for cash or account, in the subjoined Securities, viz.:—
Consols and the English Funds.
Foreign Bonds—Brazilian, Chilian, Dutch, Egyptian, Greek, Italian, Mexican, Peruvian, Portuguese, Russian, Spanish, and Turkish.
Preference Railway Shares and Stocks, Debentures, Bonds, and Ordinary Stocks and Shares.
In Colonial Government Securities—Canada, Cape, New Brunswick, Australian, and New Zealand.
British and Foreign Mines.
Docks, Insurance, Canal, Water, and Gas Shares.
Mortgages and Loans negociated in all saleable or unquestionably valuable securities.—Miscellaneous.
ON SALE,—Government Securities, paying from 6 to 8 per cent., and other properties paying from 10 to 12 and up to 15 per cent.

MR. H. D. HOSKOLD,
MINING ENGINEER,
LAND AND MINERAL SURVEYOR
CINDERFORD, NEWNHAM.

Gentlemen requiring reliable and correct information respecting any Coal or Iron Mine Property in the Forest of Dean may obtain it on application.
Surveys, Plans, Reports, and Valuations on the usual moderate terms.

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, LONDON, E.C., DEALS in all STOCKS AND SHARES, either for cash or the fortnightly settlement.
SPECIAL BUSINESS in the following gold mines:—

Don Pedro.	Rossa Grande.	Anglo-Brazilian.
Taquaril.	General Brazilian.	Sao Vicente.
	Anglo-Argentine.	

W. T. recommends the shares of the Van Lead Mine, in which he is in a position to do business. Bankers: The Alliance Bank.

MR. HENRY MANSELL, 44, THREADNEEDLE STREET, LONDON, has FOR SALE the following shares, free of commission:—

30 Drake Walls, 18s. 6d.	5 Great Wh. Vor, £17.	15 Chiverton Moor, £3⅜
20 East Grenville, £4¼.	40 Great So. Chiverton.	20 Tin Valley, 20s.
50 Prince of Wales, 29s.	10 Wheal Kitty (St. Agnes), £5¼.	10 West Basset, 22s.
20 East Caradon, £7¼.		5 West Frances, £52.
5 East Lovell, £7⅜.	50 South Merilyn, 19s.	50 Wheal Agar, 26s.
50 Chontales, £1 8s. 9d.	10 Wt. Chiverton, £50¼.	40 Tamar Valley.

SOUTH MERLLYN.—Mr. H. MANSELL advises the immediate purchase of these shares, a great improvement having taken place in the mine.
Thirteen Years' Experience.
Bankers: London Joint-Stock Bank.

INVESTMENT, LOAN, AND BANK AGENCY.
Established 1839.

PUBLIC SECURITIES of every description purchased and sold at close market prices, free of Commission, either for immediate cash settlement, or on such terms as may be agreed upon.
LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.
DEPOSITS of all amounts received for short or long periods at favourable rates of Interest.
Money and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.

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77, OLD BROAD STREET, LONDON.
SPECIAL BUSINESS in the Lisburne Mines, Minera, South Condurrow, West Godolphin, and East Carn Brea.
T. P. THOMAS is PREPARED to RECEIVE APPLICATIONS from parties disposed to join in a FIRST-CLASS LEAD MINE in CARDIGANSHIRE.

MR. CHARLES THOMAS,
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. W. H. LANYON,
(Late of Kennall Gunpowder Company)
GUNPOWDER MERCHANT,
TRURO.

MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.
MR. THOMPSON has special business in HOLMBUSH AND KELLY BRAY UNITED, ROYALTON, and several mines in the Van district.

MR. J. H. COCK, STOCK AND MINING SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.
Fifteen years' experience in Cornwall and London.

MR. G. D. SANDY, STOCK AND SHAREDEALER,
48, THREADNEEDLE STREET, LONDON, E.C.
Daily Price List on application post free. References exchanged.

MR. J. B. REYNOLDS, 70, BISHOPSGATE STREET WITHIN, LONDON, E.C.,

BARTLETT AND CHAPMAN'S "INVESTMENT CIRCULAR AND FINANCIAL RECORD"
(Published on the first Wednesday in each month)
Comprises—A Comparison of the Safety and Profit of English and Foreign Loans, a Comprehensive Review of the Stock, Share, and Money Markets for the preceding month; an Enumeration and Comparison of the Whole Circle of Investments; and Valuable Suggestions for Purchase or Sale.
*** Sent free on application.

BARTLETT and CHAPMAN have SPECIAL BUSINESS in some first-rate MINES, and they especially recommend the purchase of TIN VALLEY, LOVELL CONSOLS (Tin), and GREAT SOUTH CHIVERTON (Silver-Lead), the shares in which will certainly increase 100 or 200 per cent. in their market value within a short time, as they are closely approaching the payment of good dividends. They have also SPECIAL BUSINESS in Holmbush and Kelly Bray at £4 to £4½, and in Royalton.—36, Cornhill, London, E.C.

BUYERS AND SELLERS OF BRYNPOSTIG SHARES
Should apply to—
G. R. ROSS AND CO., 26, NICHOLAS LANE, LOMBARD STREET.

MR. EDWARD BREWIS, STOCK AND SHAREDEALER,
No. 34, OLD BROAD STREET, LONDON, E.C.
Money advanced on mining shares.
Bankers: The Alliance Bank, London, E.C.

MR. J. N. MAUGHAN, STOCK AND SHAREBROKER
(Member of the Stock Exchange),
No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE,
Bankers: Messrs. Lambton and Co.

MR. JOHN MOSS, STOCK AND SHAREDEALER,
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.
Business as BUYER or SELLER in Frontino, Chontales, Don Pedro, General Brazilian, and Taquaril Gold shares.
Bankers: City Bank, Finch-lane, E.C.

COLQUITE AND CALLINGTON UNITED.—The Advertiser has FOR SALE TWENTY SHARES in this very PROMISING MINE.
Address—"T. S.," Deacon's, 154, Leadenhall-street, City.

THE FOLLOWING SHARES are FOR SALE at absurdly LOW PRICES through unexpected misfortunes:—100 West Wheal Kitty, 6s. per share; 200 West St. Ives (offer wanted); 45 North Chiverton, 18s. per share; and 10 New Lovell.
Responsible parties can have their shares registered before paying for the same.
Address—"Ipsilon," at Deacon's News Room, Leadenhall-street, E.C.

LEAD SETTS.—MR. W. PAYNTER, JUN., has FOR DISPOSAL several LEAD SETTS, all of which are situate in good LEAD PRODUCING DISTRICTS, and promise well for produce on a small outlay.
For further particulars, apply to Mr. W. PAYNTER, Jun., Wadebridge.

LEAD MINES AS AN INVESTMENT.
Now ready, by J. H. MURCHISON, Esq., F.R.G.S.,
THE SECOND EDITION OF
THE "LEAD MINES OF CARDIGANSHIRE AND MONTGOMERYSHIRE,"—districts comprising VAN, DYLIFFE, LISBURNE, EAST DARREN, SOUTH DARREN, CEFN BRWYNO, and other important Mines. With a MAP, showing the position of the different Mines, arranged and drawn specially for this Pamphlet.
This edition is revised, with additional remarks, and more mines represented on map. Price 1s.
8, Austinfriars, London, E.C.

THE MINING ATLAS.
MR. SPARGO'S MINING ATLAS is NOW READY.
Issued in numbers, 1s. each, the first of which can be obtained at the MINING JOURNAL Office, 26, Fleet-street; and at 224 and 225, Gresham-house, Old Broad-street, E.C.

A COMMERCIAL PAMPHLET is NOW in COURSE of ISSUE by Mr. J. J. REYNOLDS, of 4, GREAT WINCHESTER-STREET BUILDINGS, OLD BROAD STREET, LONDON, E.C., in which the peculiar features and values of Government Securities, Foreign and Colonial Government Bonds, Joint Stock Banks, Railways, Insurance Companies, Gas and Water Works, Docks, Canals, British and Foreign Mines and Miscellaneous, rendered apparent to the minds of the most uninitiated, are of great value to capitalists and all intending investors.
To be had on application, or by post, on receipt of 7 stamps.
Shares recommended for immediate purchase—New Prosper, South Merilyn, and West Godolphin.

MR. P. S. HAMILTON,
MINING AND REAL ESTATE AGENT,
AND PRACTICAL GEOLOGIST,
OFFICE,—No. 72, GRANVILLE STREET, HALIFAX, NOVA SCOTIA.

N.B.—Sales and purchases of lands, quarries, and mining property negotiated upon the most advantageous terms, and with all possible dispatch. Explorations made or supervised, and reports prepared where required with the utmost care. Public attention is called to the fact that, owing to his experience as Gold Commissioner and Chief Commissioner of Mines, and as one who has been for years engaged in practical mining and geological explorations, Mr. HAMILTON has had opportunities which no other person has heretofore possessed of becoming intimately acquainted with the mineral resources of Nova Scotia.

MR. THOMAS THOMAS,
ASSAYER, &c.,
COPPER ORE WHARVES, SWANSEA.

MR. J. S. MERRY,
ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA.

MESSRS. STUART AND CO., 93, BISHOPSGATE STREET WITHIN, LONDON, E.C.
FOR SALE, and open to offers at net prices:—1 Mary Ann; 10 Royalton; 25 Prince of Wales; 40 Anglo-Brazilian; 10 Don Pedro; 50 Taquaril; 5 Van; 80 Frontino and Bolivia; 2 West Chiverton; 5 Chiverton; 40 West Godolphin; 50 East Bottle Hill, 2s. 3d.; 1 East Lovell; 25 Mining Association; 50 Mines Purchase; 20 Pestarena; 25 East Providence; 20 Lucy Phillips.

Prize Medal—International Exhibition, 1862.

CHAPLIN'S PATENT
PORTABLE STEAM ENGINES,
FOR PUMPING AND WINDING.
SPECIALLY ADAPTED for PITS, QUARRIES, &c.
SIMPLE and STRONG; require NO FOUNDATION or CHIMNEY STALK, and are EASILY ERECTED or REMOVED.
Sizes, from 2 to 30-horse power.
Stationary Engines, 1 to 30-horse power with or without gearing.
Steam Cranes, 30 cwts. to 20 tons, for wharf or pit.
Hoisting Engines, 2 to 30-horse power, with or without jib.
Contractors' Locomotives, 6 to 27-horse power.
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Steam Winches. Engines and Boilers for light screw and paddle steamers.

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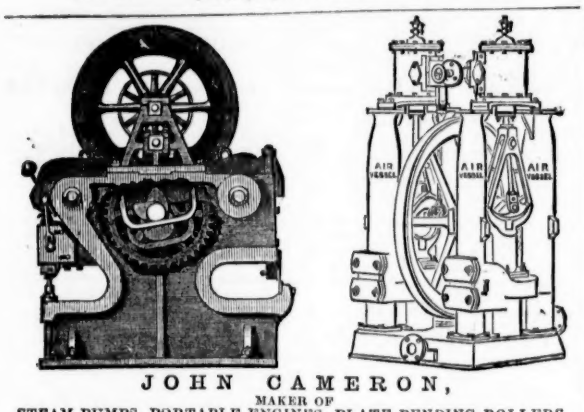
LONDON STREET, COMMERCIAL ROAD, LONDON, E.
(At Stepney Station of Blackwall Railway.)



JOHN CAMERON,
MAKER OF
STEAM PUMPS, PORTABLE ENGINES, PLATE BENDING ROLLERS,
BAR AND ANGLE IRON SHEARS, PUNCHING AND SHEARING MACHINES, PATENTEE OF THE DOUBLE CAM LEVER PUNCHING MACHINE, BAR SHEARS, AND RAIL PUNCHING MACHINES,
EGERTON STREET IRON WORKS,
HULME, MANCHESTER.

PRIZE MEDAL
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Of 1868
TO

ECONOMICAL, PEACOCK & BUCHAN INVENTORS AND MANUFACTURERS OF COMPOSITIONS FOR SHIPS' BOTTOMS &c. AND LASTING.
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PEACOCK AND BUCHAN'S
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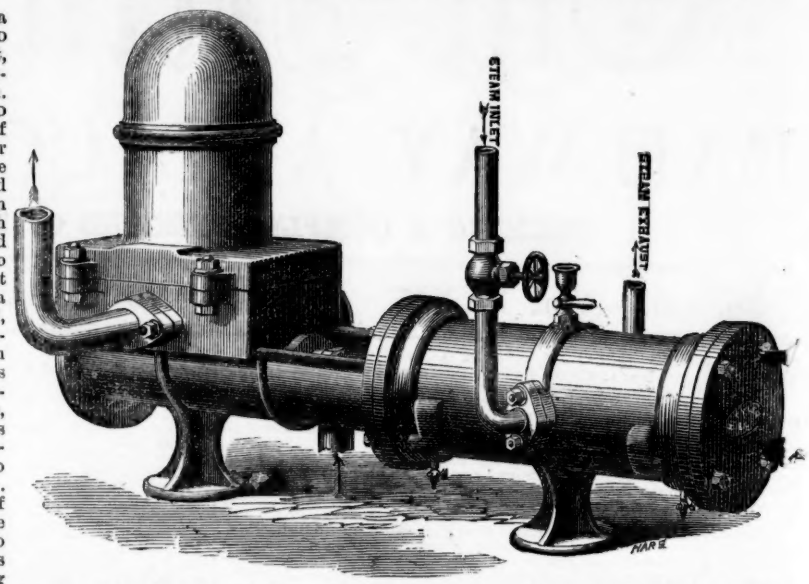
HAYWARD TYLER AND CO.'S "UNIVERSAL" STEAM-PUMP.



Our attention has lately been called to a steam pump, introduced by Messrs. HAYWARD TYLER and Co., of Upper Whitecross-street, which presents considerable novelty, there being only two moving parts in its construction.

Through the courtesy of Messrs. HAYWARD TYLER and Co., we have had an opportunity of seeing some of the pumps in operation at their factory, and were much impressed with the silent and effective manner in which they did their work. The invention consists of a steam cylinder and pump, attached directly to each other, a small distance piece only being placed between the two cylinder covers, sufficient to allow of the respective glands being taken out for packing. Within the steam cylinder is a piston, somewhat longer than what is usual, having a piston rod attached, which passes directly through the glands into the pump, upon which rod a solid pump bucket, or piston, is fixed. The piston of the steam cylinder carries within it a small cylindrical slide valve, which being actuated by the steam itself as the piston passes over certain parts or openings, reciprocates in the opposite direction to the steam piston, thereby regulating its action. It will thus be seen that in the construction of what may be termed the motive part of the machine there are *only two moving parts*, no tappits, valves, springs, or other contrivances being requisite; consequently, the wearing parts are reduced to a minimum. The force or pressure of the steam is thus brought to bear directly upon the water, the piston rod passing directly from the steam cylinder to that of the pump. The pump itself is also extremely simple, and the valves are accessible without removing or disconnecting any of the pipes. No joint whatever need be broken, with the exception of that of the air vessel, the removal of which exposes to view the whole valve arrangement. In all pumps the valves are the parts requiring the most attention. Messrs. HAYWARD TYLER and Co. have done well in making this a point of attention, and we congratulate them upon their success. The joint in question is surfaced, so that no loss of time is incurred,—the air vessel can be removed, the valve examined, and the cover replaced in the space of a few minutes.

The pumps we saw at work were of the following dimensions:—

Steam cylinder, 7 inches diameter..	}	Stroke, 8 inches.
Pump ..... 5 "		
Steam cylinder 8¾ "	}	Stroke, 8 inches.
Pump ..... 5 "		

The amount of water thrown would certainly have led us to suppose that the pumps were of larger proportions, those, however, are the actual sizes. One peculiarity of these steam pumps, which is worthy of comment, is that they can be regulated with the greatest nicety as to speed. By simply closing the steam admission valve the speed can be reduced from 300 strokes per minute to 10. This is a feature greatly in their favour, as most of the race known as "Donkey" engines will go at full gallop or not at all,—the effect of this racing speed telling most prejudicially upon the pump valves.

For boiler feeders, our idea of perfection is that the supply should be maintained *constantly* in the exact proportions as the water is evaporated. For this the Universal Pump is well adapted. Not that the water should be allowed to get low, and then be pumped up all at once, reducing the pressure, and causing inequality in the moving power; to say nothing of the damage of such a process done to the plates of the boiler by rapid contraction.

We cannot conclude this notice of the Universal Steam Pump without recommending all our readers who are interested in steam power to pay a visit to Messrs. HAYWARD TYLER and Co.'s works, where every facility for inspecting these admirable pumps will readily be afforded by those gentlemen.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,
Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. ANTON LEYKAUF, of Nuremberg, in the kingdom of Bavaria, chemist, has specified a patent relating to the manufacture of a new or improved colouring matter. This colouring matter is manufactured by employing manganese or its compounds, and ammonia or its salts or compounds, together with phosphoric acid or its compounds. The process may be performed as follows:—Pure manganese, or the cheap residuary compounds of manganese from the preparation of chlorine, is taken, and mixed with phosphoric acid; it is heated till liquified. After cooling the manganese is precipitated by ammonia or carbonate of ammonia, and is poured with the liquid flowing from the coarser undecomposed manganese ore into another vessel, in which the mixture is steamed or evaporated. Iron, or an oxide, or other compound of iron may be added for certain shades. If this process be properly performed the mass decomposes with water, gas is emitted, an acid solution results, and the colour remains separated in great fineness as a compound of oxide of manganese (and of oxides of iron if a compound of iron has been added), ammonia water, and phosphoric acid. Like results may be obtained from other compounds of manganese, iron, ammonia, and phosphoric acid, as well as directly from phosphorus, manganese, and ammonia, with or without nitric acid, and likewise from a solution of burnt bones in hydrochloric acid, and digested with sulphate of ammonia. Various shades may be obtained by decomposing bones by sulphuric acid, and mixing with manganese, and heating the whole mass, or the phosphate of lime, which is separated. Ammonia can be added at once, or the mass can be washed, and ammonia added to the salt when steamed or evaporated. In this process the lime, whether contained therein as gypsum or as phosphate of lime, is only an impurity. In one mode of carrying out this process calcined bones are decomposed by sulphuric acid, and a lye of phosphate of lime is used throughout the operation. The lime is saturated with an excess of ammonia, the solution filtered and steamed or evaporated. The phosphate of ammonia is heated to a high temperature, and when the water and excess of ammonia are driven off, manganese is gradually added, and the temperature raised. When saturation takes place no more manganese is added. The wash waters may be evaporated, and the phosphate again utilised with manganese, with or without ammonia.

CALCINING ORES, MINERALS, &c.—The invention of Messrs. T. MERZ, of Hebburn, and G. THOMSON, of Pelaw-Main, Durham, for improvements in calcining ores, minerals, and other substances, and in furnaces therefor, consists in applying a revolving furnace, such as is used in alkali works, for transforming sulphate into carbonate of soda, to the calcination of ores, minerals, and other substances, especially copper ores, or copper ores mixed with salt, with the modification that the revolving furnace is heated by a combustible gas, such as coal gas or carbonic oxide, instead of by fuel in the ordinary manner. The object of this modification is to obviate the prejudicial influence which the presence of coal smoke is known to exert on the volatilised compounds of copper, by making them incondensable. The invention also comprises the applying of the said revolving furnace to other reducing or oxidising processes, as for instance to the reducing of oxide of iron into spongy iron, or to the reducing of sulphate of baryta into sulphide of barium. For the purpose of calcining or heating ores and other substances, and in case the flame of the gas passing over the heated substance might prove prejudicial to the process the flues are separated from the interior of the furnace in the following manner, converting thereby the said furnace into a closed revolving furnace. Instead of lining the cylinder with solid fire-bricks hollow fire-blocks are used, and are joined together in such a way as to leave a number of channels or flues in the lining of the cylinder. These flues will allow a gas or common coal flame to pass through, and will thus raise the heat in the interior of the cylinder to any desired degree, without bringing the contents in contact with the fire gases. This arrangement will likewise admit of connecting the interior of the cylinder by a separate flue with any convenient condensing apparatus, or of passing a current of steam or any other gas into the furnace, and in all these cases the contents of the furnace will not be exposed to either the reducing or oxidising influence of the fire gases.

MANUFACTURE OF IRON AND STEEL.—Mr. JACOB G. WILLANS, of St. Stephen's-crescent, has specified his patent for improvements in the manufacture of iron and steel. Having observed that the immersion of heated cast-iron, either crude or refined, in water causes an absorption of the fluid into the interior of the metal, his first improvement is to supply chemical salts or other solutions in this manner, not for the purpose of depriving the metal of carbon, but of such a nature as to combine with or neutralise the sulphur and phosphorus in the metal, so that in the after course of melting or manufacture their injurious effects may be lessened or removed. To perform this he either granulates the metal into water containing in solution the beneficial chemical salts, such as chlorides, or in to other fluids which would be absorbed with similar effect; or red-hot cast-iron in the shape of pigs, or in any other form, may be immersed in, or otherwise suitably treated with, the water or fluid. In a former patent for puddling, No. 702, Mr. Willans described a method of treating cast metal granules or particles with oxide or cinder, so as to bring them into a malleable condition. In this case the cinder had to be squeezed out in the subsequent processes of the hammering and rolling the iron produced. The second improvement is to remove the greater part of the cinder or oxide from the granules after they are brought to the malleable state, and before they are hammered or compressed together, and then to compress the granules into moulds, or into shapes to produce articles of iron that will possess greater strength than if made of cast metal; these may be so when first made, or may, perhaps require re-heating and hammering. The moulds or shapes may be of the form, or approximately of the form, of the required article; or the form of the article may result from subsequent hammering or other processes; or he may remove all, or nearly all, the cinder first used, and add a sufficiency of other cinder, or an artificial cinder or welding substance, before moulding; or the process of decarburetting the granules may be conducted with so little cinder that the removal of a portion of it before moulding the granules may not be required. He prefers to have the original granules or particles made of refined cast-iron. In place of decarburetted granules of cast-iron, mixtures of malleable iron and cinder otherwise obtained may be similarly treated by separating a portion of the cinder or otherwise suitably adjusting its quantity, and then hammering or pressing the iron at or above a red-heat into moulds or forms. Thus puddle balls may be crushed and so treated. In the melting or making of steel cast-iron has been granulated, and the iron granules or particles have been decarburetted by cementation with oxide of iron and charcoal, or cast-iron has been added in preparing the mixture, and the entire melted down together. The third improvement is to heat the granules (preferring those of refined cast-iron) and oxide together in the first instance without melting the granules, in order that the carbon of the metal and the oxygen of the oxide may react upon each other, and afterwards without separating the oxide add to the iron and oxide mixture carbon, or metal containing carbon, and it may be such other minerals or fluxes as are commonly used by steel melters, and melt the whole together in order to produce steel of the desired temper. This separation of the process into two parts will allow of an average sample being experimented upon, to ascertain the amount of carbon or metal and flux to add before melting down the steel; by this means he obtains products of greater uniformity in different meltings.

IMPROVEMENTS IN THE STEAM-ENGINE—A NEW CONDENSER.—About two months ago we noticed what was called "Morton's Ejector-Condenser," as applied to the steamer Flora, and, as the invention is coming into more general repute, we now give its principal features. Mr. Morton's method of condensing is new in every particular, and it is considered as the greatest improvement effected upon the steam-engine since the time of James Watt. Mr. Alex. Morton is manager to Messrs. Neilson Brothers, Albert Engine Works, Hyde Park-street, Glasgow; and the invention is the result of experiments prosecuted during the spare hours of the last eight or ten years. The mechanism under notice altogether supersedes the necessity for the large condensing-cylinder and accompanying air-pump, as used by Watt. The condensation of the steam is effected in so small a compass that the condenser of a pair of engines indicating 24-horse power can be carried by any man of ordinary strength, while the space occupied by it is little more than that occupied by an ordinary hat. As the engines fitted with the ejector-condenser have no air-pumps to work they can be run at double the velocity, and consequently will exert double the number of horse-power, and they will work so quietly that even when making 250 revolutions per minute the noise is not at all annoying. Besides saving power by its simplicity, and space by its smallness in size, its use is attended with a direct saving of fuel. In illustration of the last-mentioned point, it may be stated that one of these condensers was recently applied to a pumping-engine on Drumpeller estate, and the consumption of coal for six hours was reduced from 56 cwts. to 33 cwts. The ejector-condenser essentially consists of three concentric tubes, terminating in nozzles having a conoidal form, the central tube being in communication with the water-tank, from which a current of injection water is obtained, while into each of the other tubes there is admitted the exhaust steam from one of the cylinders; and these three tubes open into the hot-well, or waste water receptacle, by means of a gradually widening or trumpet-shaped mouthpiece, having a parabolic curvature. This last-mentioned appendage, the trumpet-shaped mouthpiece, is undoubtedly the most essential part of Mr. Morton's condensing apparatus, inasmuch as the condenser would scarcely be of any avail in condensing engines, because the steam as it leaves the cylinders would require to have a pressure much above that of the atmosphere before any water could be possibly discharged. Then, as regards the mode of action of the parts enumerated, it may be mentioned that the jet of cold water, the condensing water, passing through the central tube, rushes into the condensing part of the apparatus, and there meets with the exhausted steam from the cylinders, and almost instantaneously condenses it. The speed at which the ejection and condensing water travels is very great, and is due to the vacuum; and the energy of the water-current is quite sufficient to force it out against the vacuum. The exhaust steam alone maintains a vacuum of 13½ lbs. per square inch. In fact, this condenser may be regarded as an injector reversed—that is to say, instead of forcing water into a vessel by the direct action of the steam, this apparatus forces water out against a pressure of air equal to the vacuum, and also against a head of water-pressure of some feet in height; and it does this by the action of the exhaust steam from the cylinders of steam-engines after it has already performed its duty in them. On account of the mode of action of the apparatus, the term ejector-condenser was most appropriately applied to it by Prof. Rankine. No steam is used direct from the boiler, as none is required unless when starting the engine. In working an ordinary condenser and the accompanying air-pump a great amount of energy is wasted; in the ejector-condenser all this energy is saved. These condensers are being fitted to engines in various parts of the kingdom. At Summerlee Iron Works, at Ryesholm Pits, Glengarnock Iron Works, Merry and Cuninghame are having it applied to about half-a-dozen engines; Mr. Macfie, the member for Leith Burghs, is using it at his sugar-refinery, Liverpool. It is being applied to steamers, and steamers; and two eminent engineers connected with the French Navy, MM. Audenet and Du Bult, who recently visited Glasgow, are now preparing to prosecute their experiments on a steam-transport on the Loire, sailing to and from St. Nazaire. If all that is claimed for "Morton's Ejector-Condenser" is realised in practice its success is certain.

SELF-ACTING RAILWAY SIGNALS.—An invention, the object of which is to prevent accidents at those places where they most frequently occur—at tunnels, curves, junctions, and stations—is being introduced by Messrs. ALEXANDER and HILL, of Delancey-street, N.W. Their invention consists in a simple lever, placed longitudinally beside the rail, at such an inclined plane that the engine does not injure it, nor will the lever in the slightest degree affect the engine. This lever is depressed by the tyre of the wheel of the engine, and erects a danger signal; when the train has then passed on to ¼, ½, ¾, or 1 mile, it passes over a similar lever, and reverses the first signal to safety, so as that any other train may then follow. On the occasion of it acting at the first signal, it also denotes at the second its approach, or may at any given distance in advance ring a bell at the station, or where required. The patentees have also introduced the simplest means for adjusting the wire, to prevent the action by changes of temperature from unfitting it to perform what is required. They can also continue this system in a series of such signals along a whole line of railway, having overcome the difficulties heretofore existing, by simply introducing a "dog" to work into each lever. The same gentlemen have likewise invented an improved means of removing all gaseous matter from coal mines, and thereby obviate all danger to human life; but of this invention they are not yet prepared to publish the details.

REDUCING HARD SUBSTANCES.—Messrs. BEN. WALKER and JOHN F. A. PFLAUM, of Leeds, have invented some improvements in machinery for reducing bulldog or other hard substances. For this purpose they employ a strong metal pan, the internal form of which is by preference an inverted truncated cone, it is open at the bottom, and the sides are chequered or fluted. In or near the centre of the pan is mounted a conical shaped pestle, which is also an inverted truncated cone, but its incline is less than that of the pan, it may also be chequered or fluted. This pestle is by preference fixed to the piston-rod of an ordinary steam-hammer, which piston-rod is firmly guided. The action of the steam-hammer is such that when the piston is at the top of its stroke the pestle will be in such a position as to leave a space between itself and the lower edge of the pan sufficient for the escape of the reduced material. The pestle may be moved up and down by an ordinary eccentric motion, or it may be coupled direct to the piston of an ordinary steam-engine. The size of the opening for the escape of the reduced material may be varied to suit the work to be done.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending May 16 was 11,234*l.* 8*s.* 4*d.*

Original Correspondence.

NOTES ON COLLIERIES IN THE LEEDS DISTRICT.

SIR,—At the Low Moor Iron Works, of which Messrs. Hird, Dawson, and Hardy are the proprietors, situated about three miles from Bradford, five blast-furnaces are in operation. The pig-iron is manufactured solely from the blackbed ironstone, obtained from their own mines in the locality, and from the Neville Hill Mines, near Leeds. The ironstone is calcined in round kilns, plated outside, of modern construction. The coke is made partly in ovens, and some in open clamps. The limestone is got from Skipton. Cold blast alone is used in these furnaces. The make of each is about 80 tons per week. This iron, when manufactured into plates and bars, sells at very high prices for boilers, nail-rods, &c.; it is also extensively used for castings at the foundries of the Low Moor Iron Company.

There are upwards of 40 pits, from which are drawn coal or ironstone, or both, for the supply of the works, besides others disused, and others used as pumping-pits. The arrangement and fittings of these pits are nearly the same in all; they are sunk in pairs, close together; one, the upcast, is 6 ft. diameter; the other, the drawing and downcast pit, 9 ft. inside; the upper part is bricked, and the lower part is secured with deals. From 40 to 200 tons per day are drawn in each pit, and the depths range from 40 to 140 yards. The engines for winding are generally single cylinders, on the second motion; some are horizontal, and others are vertical beam-engines. Two cages are drawn in each pit, each cage holding one corf, which carries not more than 3 cwts. of coal. The ropes are generally round, one being an hemp and the other an iron wire-rope; when flat ropes are used the same rule is observed. There are two guides for each cage in the pit, made of iron rods. Each cage is fitted with a safety-hook—similar to those already noticed in the *Mining Journal*—being composed of four plates, secured by a small pin, and moving on a bolt through the centre of them; the chain holds by the two inner plates so long as the small pin is intact, but the inner plates have wings projecting, one on each side, which, on being drawn through a small aperture in the head gear, are drawn inwards; this at the same time cuts the pin, causes the slots in the upper part of the four plates to be flush with each other, and releases the link of the chain, the wings then expand out again, and the cage rests by them over the aperture in the head gear. The working of coal at these pits is confined to the blackbed and better-bed coals. The ironstone is got from above the blackbed; it runs in four courses from 1 to 3 in. thick, and balls above these, being about 5 ft. of ground altogether above the coal. The tramway—which is obsolete in most districts—is still used throughout these pits.

Two pumping-engines, of peculiar construction, raise water from the depth of 100 yards by two lifts in each pit. Each is a beam-engine, the connecting-rod from the beam giving motion by means of spur-wheels and a second shaft to two cranks and connecting-rods. These connecting-rods work vertically up to two other beams, placed on the front wall of the house, and the pump-rods are attached to the outer end of these beams, by which the rods are raised and lowered alternately.

At the Bowling Iron Company's Works, one mile from Bradford, six furnaces have been built, but only three are now in blast; cold blast is used; blackbed ironstone is used solely, with coke, and the ironstone is calcined in a large stone kiln near the top of the furnaces, the bottom of the kiln being on a level with the top of the furnaces. This company have numerous pits working the two beds above-named, and the iron manufactured is of the first quality for boiler-making and other purposes.

In the district between Leeds and Wakefield Messrs. J. and J. Charlesworth have extensive royalties taken. They possess numerous pits at the Rothwell Haigh and Robin Hood Collieries, but many of them are of small powers. The Rothwell Haigh, or Middleton seam, the Little seam, and the Beeston bed, are principally worked. Their prices for coal in Leeds, at the Crown Point Wharf, is—for Rothwell Haigh coal, 11s. 3d. per ton; second quality, 9s. 2d. per ton; engine slack, 4s. per ton. The Bowling Iron Company have several pits near Leeds, principally for getting the blackbed ironstone, which is sent to their furnaces at Bowling. Their prices for coal, at the wharf near Leeds, is—rock coal, 9s. 2d. per ton; blackbed (dressed), 7s. 6d. per ton; ditto (undressed), 4s. 7d. per ton. Messrs. R. and W. Garside have two blast-furnaces at the White Horse Colliery, in the same locality, one in operation with cold blast, using the blackbed stone and coke. The ironstone is burnt in open clamps; the coke is made in 30 ovens, having flues and two large chimneys to them. At Neville Hill Colliery (Mr. Faviell's) several pits are in operation in the lower seams. The blackbed ironstone is sent to the Low Moor Iron Company's furnaces.

The Waterloo Main Colliery is leased by Mr. J. T. Leather from Mr. H. F. Meynell-Ingram, of Temple Newsam. There are two pits in operation from the Beeston bed, about ½ mile apart, one being downcast, the other upcast. The downcast pit is 120 yards deep to the Beeston bed. The winding-engine has two 20-inch horizontal cylinders, direct-acting; two flat wire-ropes draw two 6-cwt. tubs in each cage, on one deck, four wire-rope guides to each cage. The pumping-engine is a single cylinder horizontal engine, on second motion, with double crank, connecting-rods, and two T-bobs, raising water in two 9-inch lifts. The Beeston bed is worked about a mile southward from the pit; at the extremity it measures 4 feet 6 inches thick, including 2 in. of shale about the middle. An inclined plane, 150 yards long, brings the coal to the pit bottom; beyond that there is a level plane worked by horses; further on there is a dip to the south about 1 in 36, which is intended to be worked by an engine placed on the surface, the laden tubs being drawn up by it, and the tubs run down by gravity with the rope.

Several modes of working the coal have been, and are, in practice. Long wall has been tried, and most approved of. The method most practised is by banks and pillars; a set of four banks are driven up together on the face 8 yards wide, east or west; two men in each, and two roads; 4-yards pillars are left between the banks. Every 12 yards the pillars are holed through. Then the back pillars and timber are taken out, the coal being taken from the fresh banks through the last-made holing to the south or narrow bord, which is extended by the pillar being left, and the solid coal to the south of it. This set of banks may be driven 300 or 400 yards in this direction, having a narrow bord on the north side, also, for a return, when another set may be commenced alongside, taking with it the pillar of the bord-gate now stopped. But it is sometimes required to follow up a second and third set of banks close after the first, in which case the coals from the first and second set of banks have eventually to come into the third bord-gate, as the others are stopped by removing their pillars.

Another method practised is the Northumberland and Durham system of bord and pillar. The bords are made 4 yards wide, walls 2 yards, pillars 40 by 16 yards. The bords driven west are holed in the bottom of the coal. On reaching the boundary the pillars are removed *en masse*, as far as possible, proceeding northward on the end of the coal. In this direction the under-clay is holed in, being more easily extracted than the coal, and producing at the same time more large coal than by the former process. Mr. Rothery, the viewer of this colliery, anticipates from the employment of coal-cutting machinery, and the prohibition of the use of gunpowder, an improved marketable value given to the coal worked, and much greater security in the mine. At this colliery safety-lamps are used entirely in the workings, but the use of gunpowder is prohibited. The anomaly in coal mining, so much persisted in in other districts, is considered to be inconsistent with safety.

The upcast pit also draws from the Beeston bed, about 130 yards deep. The coal is about 4 ft. thick in this locality. An engine-plane, about ½ mile long, dipping south about 1 in 36: the full tubs are drawn up by an engine, the empty tubs run by gravity down with the rope; the rope is ½ in. in diameter. From the top of the engine-plane to the shaft (westward), a distance of 700 yards on the level, is worked by horses. The engine and two boilers are placed in the Middleton seam, which is here, owing to a fault, 36 yards above the bottom of the pit. The rope from the engine passes down a sloping drift into the Beeston bed, thence along the east level to the top of the engine-plane. The winding-engine at the top of this pit is similar in size and construction to that at the downcast, and the cages are of the same principle. The pumping-engine—single horizontal cylinder—works two lifts of 15 in. in diameter from the Middleton seam, on the same principle as that described at the downcast pit.

There are five pits at West Allerton and Astley, near Swillington, worked by Mr. Bower, on Sir Charles Lowther's property. The winding-engines at each pit are of the double-cylinder horizontal construction. One of these is of great power, two 36-in. cylinders: it draws from the depth of 270 yards, with 17-ft. drum for round wire-ropes, direct acting. The other engines are of much smaller dimensions, on the second motion. A pumping-engine double-cylinder, horizontal pumps, water in two lifts by means of cranks and T-bobs, from the depth of 70 yards. There is another pumping-engine at this colliery of the three-beam construction before described.

At the Kippax Colliery Messrs. Lock and Warrington are the lessees. The Haigh Moor seam is worked at the depth of 110 yards, having one pumping and one winding-engine, each double horizontal cylinders. The cages hold two tubs in one deck; they are fitted with Owen's safety-catches. Messrs. Carrett and Marshall's coal-cutter has been in operation here, using water as the motive-power. It is not worked at present, and it is understood that compressed air will be substituted for water-pressure when the working of it is resumed.

The collieries in this locality, and east of Castleford, approach the Permian formation. It is a question yet to be solved how far coal extends underneath this formation, but it is probable a large tract of coal field may exist beyond the already explored portion of the Yorkshire coal field from this district to the Nottingham field.

C. V.

THE PRESENT METHOD OF BUYING AND SELLING COPPER ORES.

SIR,—During the depression of the market, which for more than three years has been crippling our copper mines, I have from time to time had the pleasure of reading in the *Mining Journal* letters from some of your correspondents, giving mine adventurers excellent advice and cheering words of encouragement. We have been told to petition the lords for a remission or a reduction of royalties; we have been advised to practise every possible economy; and we have been admonished upon the paucity of our explorations for the discovery of shallow deposits of ore. These counsels have very generally been acted upon. Some of the lords have liberally responded to the appeals made to them; the expenditures of the mines have been cut down to an almost parsimonious minimum; and, in spite of the discouragement of the present low price of ore, important tutwork operations are daily being started.

I have observed, as rather a remarkable fact in connection with the communications on this subject, that while nothing has been omitted from the discussion which could tend to lessen the expense of the mines, not a word has transpired with regard to enhancing the prices of their produce. I am very unwilling to think that the method at present pursued by the British miner in selling his ores is regarded as admitting of no improvement, and I am equally unwilling to believe that the copper miners of England have not the means of bringing about a more satisfactory state of things if they will only bestir themselves, and take united action. The smelters rule the price of copper ore. The miner, by placing his ore upon the Ticketing List, places himself entirely at the mercy of that powerful body known as the Associated Smelters, who are thus constituted the valuators of the stuff they buy. Their assayers settle the produces, and they name their prices for the different parcels. Now, in this arrangement, I would ask what guarantee has the miner that the small band, who can associate for the purpose of fixing a price for the goods they sell, have not also sufficient coherency to unite and agree upon the prices at which they will buy? The motive is equally powerful for either course.

The smelters cannot smelt economically without sulphuret ores of a low produce, and they have no other sources of supply than the British mines. Let us, then, combine, and name our terms and prices, instead of passively submitting to sell our produce at any price which may be offered for it. It would be of infinite value to the copper mining interest to form a Miners' Association, which should have for its object the protection of the ore-selling miner. It would pay us well to employ a first-class assayer or two, and, by liberal remuneration, to secure for ourselves as efficient and active service in our behalf as that now obtained by the smelters by similar means.

A few shillings more per ton of ore would altogether change the face of the balance-sheet of many a call-making mine, and make many hundreds of tribute pitches workable which are now lying idle; and, as there is no doubt that judicious and combined action would easily accomplish that desideratum, I trust that some of your able correspondents will take up the subject, and discuss in your columns the movement I have ventured to indicate.

METALLICUS.

May 18.

THE LAKE SUPERIOR COPPER REGION.

REVIEW OF LAKE SUPERIOR COPPER PRODUCTION FOR 1868, WITH PROSPECTS FOR 1869.

SIR,—The production of rough copper on Lake Superior for the year closing with 1868, as per statistics carefully compiled by the Editor of the Portage Lake Mining Gazette, was 13,048 1758-2000ths tons, against 11,735 tons produced the year previous, showing an increase of 1313 1758-2000 tons. Copper in the condition here referred to is worth about 75 per cent. for purity, the foreign matter making up the 25 per cent. is chiefly composed of spar, quartz, lode trap, and other vein matrix, which is readily separated from the metal by melting. As regards profits, the past year has been a very unprofitable one, only two companies having declared dividends out of an aggregate of 40 working mines. The dividends by these companies amount to $90,000, being the only revenue representing (in the entire country) the permanent investment of $16,500,000. But while the income has been unusually light, the demands made upon stockholders have, as compared to former years, been correspondingly limited, as shown by the fact that but $550,000 was levied, and the levying of this amount was chiefly to finish the equipment of a few first-class concerns, which gave more than the ordinary promise of success.

The great disadvantage of working under high rates of wages and supplies, as compared to the market value of the product, which has ruled during the past two years, has had somewhat of a beneficial effect in weeding out what we term in this country "wild cat" concerns, got up purely for purposes of fraudulent speculation and plunder, and in forcing a tendency to economy, which I am free to say has received more attention from directors and mining agents than ever before; and looking at the unusually low price that ingot has been selling for, it is manifest that nothing short of turning over a "new leaf" in the matter of expenditures has saved the entire mining interest from shipwreck.

Attention has been given with much success to the treatment of rock in the different stages of its manipulation, such as hoisting, breaking, tramming, stamping, and washing; and notwithstanding the improvements in stamping and washing over a few years ago, there are different processes, each claimed by its advocates as the best, but I shall not now enter into a discussion as to the relative merits of these contestants, but defer it to a future occasion. The year inaugurated bids fair to lead the most favourable of its predecessors in the yield of metal. A careful survey of the working force and capacity of each mine in the three districts furnishes data for the following estimates:—

Portage Lake district	Tons 11,000
Kewenaw district	3,500
Ontonagon district	1,200=15,700

showing a probable gain over 1868 of 2587 tons. This estimate is very conservative, and allows no increase in the districts of Kewenaw and Ontonagon, although operations in both of those districts already exhibit considerable stimulation. The only marked increase that I have put down is for Portage Lake, a trifle over 2500 tons. It is in this district that the celebrated Calumet lode was discovered, and mining operations commenced some two years and a half ago, and already three mines are producing an aggregate of 450 tons per month; and so prolific is the metal, and complete the equipments, that it is claimed the cost does not exceed 10 cents per lb. to place the copper in the Eastern markets. Like all mining experience, however, this is an exception, and is by no means an index as to the cost of production at the average paying mines. The present average cost of producing and placing copper in market by the old standard mines, which have heretofore borne the honour of disbursing dividends, is from 18 to 20 cents currency per lb., which allows a tolerable margin for profit. Of this class there are are now about six in number. Another class, which might be termed grade 3, fluctuates between this and the paying point, and numbers about 12. The remaining companies, with but one or two exceptions, approach very nearly a self-sustaining basis, and may be rated as progressive. From these facts you will observe that there are no mines depending exclusively upon assessments for support; and those working, in the face of the demoralised condition of the market, are naturally running at the very minimum of production, and it is upon the basis furnished by the consideration of these facts that the foregoing estimates are given. Should anything like a general improvement, caused by greater consumption and increased demand, take place, the entire interest would assume a new phase, and activity prevail in many places which are now barely kept alive, awaiting more favourable conditions for a return of interest upon capital invested. The tariff for the protection of copper, which became a law during the late session of Congress, has so far failed to meet the expectations of its friends; and, paradoxical as it may appear, the passage of the law is accounted as the reason of the unprecedented depression of the market, as it has transpired that heavy purchases were made on time, at high figures, by speculators, in anticipation of benefits to accrue from the enactment, which not occurring, they were thrown upon an uncharitable market, and the most indiscreet of them forced to "bite the dust." Following this purging process, we are in hopes the market will rally.

Houghton, Lake Superior, Michigan, April 22. T. W. BUZZO.

RECENT FIRE IN THE MINES OF GOLD HILL, NEVADA.

SIR,—The following is the list of Englishmen who perished in the above fire, on the 7th ult. It may be of interest to some of your Cornish readers:—

James, Richard, and George Bickle, of Calstock, Cornwall.
George Peters, of Crowan, Cornwall.
Joseph Matthews, of Beer Ferris, Devon (has two sisters in England).
Anthony Toy, of Redruth, Cornwall (married two weeks previously).
William Mitchell, of Cornwall.
William and Edward Jewell, of Illogan.
Thomas M'Cullum, of Cornwall (has a father, mother, one brother, and three sisters in Cornwall).
Harry Stevens, of Breage, Cornwall (leaves a wife and child in Ashtown).

This has been a sad calamity, and I fear will bring sorrow to many a Cornish home.—59, *Mark-lane, May* 18. J. T. P. PECHEY.

NOVA SCOTIA GOLD FIELDS.

SIR,—The excitement of last year has completely subsided, but, with returning summer, the work of exploration and development has begun on several new properties, and fresh discoveries may help to awaken fresh interest. At the urgent request of the mining community, the publication of the Nova Scotia Mining Gazette will be resumed this month, and as during its issue the revenue from the gold mines was more than doubled, it is possible that the current year will witness a further expansion of the industry which is beginning to attract the attention of the financially as well as philosophically speculative towards this province. The subjoined notes may, perhaps, be acceptable to English readers:—

TANGIER.—The Strawberry Hill Mine, once belonging to the unfortunate Nova Scotia Land and Amalgamating Company, of London, sustains well the character of this the oldest developed district. The average production since January has been 150 ozs. per month, at a profit of about 10 per cent.

SHERBROOKE.—The Wellington property has been sending an average brick of 250 ozs. per month since the beginning of the year. The Dominion Mine is at last baled, and now working day and night. April's crushing is expected to result in a bar of 200 ozs. The Wentworth, Canada, Chicago, Meridian, Delta, Metropolitan, Woodbine, and Caledonia companies are working in a small way.

WINE HARBOUR.—The tunnel on the El Dorado property, the last 200 ft. of which have been driven by machinery, is at last completed. Actual working is limited to the El Dorado, Globe, Provincial, Eureka, and Napier companies, but explorations are to commence this month on several new claims.

ISAAC'S HARBOUR is producing slowly. Experiments are to be made this summer with the alluvium, and for that purpose two tail sluices have been ordered. If as rich as alleged, the property would not have been allowed to remain idle so long, and the owners, instead of running away from the ground to spend their time in Halifax, would have been running ingots into the mould to spend in winning more gold.

MUSQUODOBOIT.—The accounts are still encouraging. Two mills are in successful operation. One mine owner is building a tramway from the mine to the settlement. The other principal mine owner, Mr. Bürkner, has opened a new lode over 5 ft. in width, showing much visible gold. A crushing from a lode over 2 feet wide gave 15 dwts. per ton, and being slate-bound the actual cost of raising and reduction did not cost more than $5, or pennyweights, per colonial ton.

FIFTEEN MILE STREAM.—This district, still reported promising, appears to suffer for the want of a road. One was promised by the Government, but not built; and communication with the outer world and the diggings is cut off by forest and innumerable swamps.

GOLD RIVER.—A survey of this district is about to be undertaken, and immediately afterwards Mr. Auguste Michel, well known to readers of the *Mining Journal* in connection with the report on the Chaudière Gold District, will commence systematic explorations upon a large tract belonging to a French Canadian company. Other adventurers will also operate here in the summer, and thus before long it would be known whether the district justifies the high opinion entertained of it by so many experienced gold miners.

OLDHAM.—The returns from this district continue satisfactory, no recent crushing being under 1 oz. per ton.

RENFREW.—The Ophir Company sent up last week 288 ozs., the months' results, which is about the present average.

UNIACKE.—Although working in a small way, this district remains steadily productive. The Uniacke Company contribute monthly about 120 ozs. The Union Company last week obtained 15 ozs. from 5 colonial tons. The Central Company received 18 ozs. of gold from 8¼ tons of quartz; and the Montreal Association have come across a belt of ore over 14 feet wide, which contains several sights.

OVENS.—It is intended to begin operations here again next month. The property hawked about in London during two or three years for 30,000*l.*, sold lately for $6000, or 1200*l.* A neighbouring property, quite as desirable, was acquired for 120*l.*: 500*l.* a piece would have been a much nearer approximation to their value.

LAURENCETOWN.—It is still asserted that one property in this district has been bought on London account for 12,000*l.*; but this has been stated so often, that until the reputed purchasers are seen in possession; no one will believe the sale to have been accomplished.

WAVERLEY.—The report of Prof. Hinde is likely to benefit this district by drawing attention to its past productiveness and future capabilities. Actual works are at present conducted only on a very limited scale.

Halifax, Nova Scotia, May 6. ACADIENSIS.

GOLD PRODUCT OF NOVA SCOTIA SINCE FIRST DISCOVERY.

District.	1862-68. The oz. valued at £4.	1862-68. Per sworn returns.	1860-61. Estimated.	1862-63. Stolen or not reported, estimated.	1860-61. Total.
Waverley	£179,060	Ozs. 39,644¼	Ozs. 1050	Ozs. 4070¾	Ozs. 44,765
Sherbrooke	156,000	34,535	1100	3465	39,000
Renfrew	93,176	20,976¾	200	2117¼	23,294
Wine Harbour	68,160	14,746¼	750	1543¾	17,040
Isaac's Harbour	37,828	8,346	250	861	9,457
Oldham	30,920	6,927	100	703	7,730
Tangier	22,312	4,520½	150	507½	5,578
Uniacke	21,748	4,942¾	—	494¼	5,437
Montague	16,100	3,840¾	—	184¾	4,025
Ovens	10,100	442½	1850	232½	2,525
Laurencetown	2,252	412	100	51	563
Unclassified	1,944	440¾	—	45¼	486
Co. Harbour	400	40	50	10	100
Total	£640,000	Ozs. 139,814½	Ozs. 6000	Ozs. 14,185½	Ozs. 160,000

COMPARATIVE STATEMENT FOR 1867 AND 1868.

District.	Gold product. 1867. Ozs.	1868. Ozs.	Quartz crushed. 1867. Tons.	* 1868. Tons.	Miners. 1867. Ave. daily	1868. No.
Isaac's Harbour	1263½	673	782½	598¼	40	47
Wine Harbour	846	1248¼	1670	2938½	43	74
Sherbrooke	9464	7070	7378	9880¼	115	191
Tangier	691¾	921½	734½	725¼	21	38
Montague	436¾	384¾	244½	350	25	—
Waverley	3942¼	2387½	10510	6372	149	118
Oldham	1100½	719	870¼	1011½	49	26
Renfrew	7905	3373¾	7222¼	5994¼	197	127
Uniacke	1622¾	3247½	1967¾	2874¾	46	89
Laurencetown	—	272	—	383	—	31
Unproclaimed	39¼	44¼	16	136	16	9
Total	27,314¼	20,541¼	31,385¾	32,261¾	702	774

* Colonial ton only 2000 lbs.

LEAD MINING IN WALES.

SIR,—Do capitalists want good investments? If so, and they are inclined to lead mining in Wales, I direct their attention to a piece of mineral land about a mile in length, situated immediately to the west of the celebrated old Cwmystwith Mine, in Cardigan, which has made and enobled many men (if by wealth it were possible), and is still one of the best mines in the country. Well, it is an established fact that all the lodes from the old mine pass through the land in question, and yet they remain undeveloped, excepting some superficial openings

at surface, where at every point lead has been found. And I am informed that at more than one point the yield is from 1 to 2 tons of ore per fathom. This property can be developed, and, for aught appears, be made profitable for generations, without pumping appliances, with plenty of water power on the property, and yet it remains in a dormant state. Why is this?

Goginian, May 18. R. WILLIAMS.

MINING IN AUSTRALASIA—MONTHLY SUMMARY.

MELBOURNE, March 30.—Last month the discovery at Mount Moliagul of the largest nugget ever found in any country was recorded; since then several other nuggets have been unearthed in a different direction. This El Dorado is the Berlin diggings, 4 miles from Kingower, the discovery of which was reported several months since. The first nugget of any size found here weighed 20 lbs., then one of 40 ozs.; but these were eclipsed by a discovery of a third, weighing no less than 893 ozs., or over 74 lbs. troy. The finders of this splendid lump of gold were two diggers, named Dragon and Hoare, who came upon it at a distance of 3 feet from their shaft, which had been sunk about 20 feet. A regular rush has set in to this gold field, whose glories have dimmed for the present those of the famous Spring Creek. Several nuggets of smaller size have since been found. There is, moreover, no lack of fine gold as well, and an ounce to the load is spoken of as a common prospect. There is every probability of this gold field being a permanent one, as there is abundance of ground to be opened. The want of water is, however, a great drawback at present. Several minor rushes have taken place during the month, one of these being to Corner Inlet, near Wilson's Promontory, which is the southernmost point in Victoria, and consequently on the whole continent of Australia. The precise locality of the auriferous country is the Stock Yard Creek, about 6 miles above the tidal influence. The precious metal is found in a slightly water-worn bed of quartz, pebbles, and gravelly drift, on a clay and soft slate bottom. The gold, though plentiful, is somewhat light, and requires careful manipulation to save it; the amount of water to be contended with is also a drawback, and large parties are required to master it. A rush has also taken place to the Tangil River, in Gipps Land, where good prospects have been discovered in the beds of several creeks, and some gold-bearing reefs have been opened. A rush of Chinese diggers has also taken place in the Avoca district; from the secrecy, however, which this people invariably maintain as to their operations, it is impossible to obtain authentic information as to their success, or the contrary.

SYDNEY, March 27.—The exports from the gold fields are generally encouraging. In the Moruya district, several new reefs have been opened, and those at Mogo are reported to be highly auriferous. The yield from Araluen keeps up an average of about 1000 ozs. per week, and new ground is being opened. At Ence Creek 13 machines have been erected, and are working night and day—a very large amount of stone having accumulated, the alluvial diggings promise well, recent washings having averaged about 9 dwts. to the load. The recently discovered alluvial workings at Cargo, in the western gold fields, are extending; gold has been found in almost every direction; there is a population of about 1200 on the ground. In the north several nuggets from 2 ozs. downwards have been found at Pretty Gully. The receipts of gold at the Sydney Mint by escort during the past month were—from the Western gold fields, 7763 ozs.; Southern, 5357 ozs.; Northern, 916 ozs.—total, 14,036 ozs.; against 20,412 in January: 49 lbs. of pure quicksilver have been extracted from 105 lbs. of the rough ore, or "cinnabar," found in the quicksilver mines of Cudgegong.

ADELAIDE, March 30.—The mining intelligence is generally good, but the reviving effect of better prices would be checked by the adverse news from this market. The works of the Glen Osmond silver mines were to be resumed. At Jupiter Creek a 7-oz. nugget of gold had been found; and at the Gatta Creek workings gold had been found in the conglomerate.

BRISBANE, March 24.—The last escorts brought the following quantities of gold—from Gympie, 2000 ozs.; Cape River, 1237 ozs.; and Gladstone, 731 ozs.: 80 tons of quartz from London Reef, Gympie, have yielded 1388 ozs. Gold export during last month 13,674 ozs., of which 9703 from Maryborough. Further parcels of ore from the Galena mine have arrived; the best assay showed 37 ozs. silver, and 69½ per cent. of lead to the ton of ore.

AUSTRALIAN MINES.

YUDANAMUTANA COPPER.—The superintendent (Adelaide, March 18) states—You will be pleased to see by the account sales of two parcels that we are keeping up our metal to a high standard—the agreed average of these parcels being respectively 94⅜ and 95⅛ per cent. The returns for February are—copper made, 51 tons; dispatched to Port Augusta, 50 tons 2 cwt. 1 qr. Copper sold since last advices, 40 tons 5 cwts. 3 qrs. 5 lbs., yielding net 2969*l.* 6s. 9d. The following appears in a supplement written at Blinman by the superintendent, under date March 22d:—To keep four furnaces going Terrell has been using a large quantity of third-class ore, making the charg s of a much lower percentage than our average; to this the falling off in the return is mainly attributable. We have good rich stopes to fall back upon when we hole to the main shaft. As soon as we hole to the main shaft we can fall back upon our stopes, where there is a large quantity of first-class ore standing. The next few weeks our returns will be larger. Finding that our reserves of wood are dryer than was anticipated, I have resolved to hold out against the contractors, and reduce the price to 10s. per ton green, 11s. mixed, and 12s. 6d. dry sound. I am also trying to effect a reduction in the working cost. Capt Terrell reports under date March 22: "Blinman Mine: In No. 1 winze the lode during the month has been not so rich as formerly; the ground being harder contracted or squeezed the lode, in consequence of which, there will be a falling off in the returns this month (from February month—51), but as the ground changed last week the lode is opening out again. The stopes are each looking well, the same as last reported. No scarcity of wood or charcoal, and the fire-bricks made on the mine still improving. Everything else going on satisfactorily." The following copy of telegram was sent by the superintendent, to Adelaide, from Blinman, dated March 30:—Nearly 5 in. rain fallen; nothing new; 13 tons dispatched.

WORTHING.—Adelaide, March 30: The shaftmen are busy cutting the plat at the 93, and also driving the cross-cut towards the lode at that level. The plat we hope to have completed by the end of this month, then we shall have the cistern plat to cut and fix the plunger at the 93, when we shall be prepared for the large body of water which we may expect when the lode is cut. I have set the plat to cut at 10*l.* per cubic fathom, 2*l.* less than in the level above, and the cross-cut at 10*l.* per fm. for driving. The lode in the 83 north is about the same as last reported; ground driven during the month 3 fms. 3 feet; present price for driving 12*l.* per fm. The rise in the back of the 83 continues hard, and poor at present. We have now about 4½ fms. to hole to the 53 winze; when this is done, which will be getting short by the end of the month, it will enable us to go on working the north part of the mine, which we hope will increase our returns; ground risen during the month 7 ft. 5 in.; present price for rising 31*l.* per fathom. We have at last cut the flookan in the 73; it was running right across the level, so that we have cut it at its nearest point. There is not the slightest sign of a lode, only a large stream of water, which has cut down the water out of the winze we commenced in the bottom of the 53 south. The water in the 63 appears also failing, so that I am in hopes we shall yet get through in the south part of the lode. The 53 winze north is improving for ore; the lode is about 1 ft. wide, of solid ore in the north end of the winze. The stopes are about the same as usual in quality, but of course less in quantity. Ore raised and dressed during the month 170 tons. Ore on hand 52 tons of 9 per cent., and 65 tons of regulus of 50 per cent. Number of hands employed, 127.

PORT PHILLIP AND COLONIAL GOLD.—Mr. Bland, Clunes, March 27: The quantity of quartz crushed during four weeks ending March 3 was 4890 tons. Pyrites treated, 87½ tons. Total gold obtained, including from pyrites, 2632 ozs. 6 dwts., an average per ton of 10 dwts. 18⅛ grs. The receipts were 9850*l.* 1s. 11d. Payments (including 1410*l.* 5s. 3d. paid on account of firewood and timber contracts), 5908*l.* 14s. 9d. Profit 3941*l.* 7s. 2d., added to which was last month's balance of 814*l.* 7s. 1d., thereby making an available balance of 4755*l.* 14s. 3d. The amount divided between the two companies was 3500*l.*, the Port Phillip Company's proportion of which amounts to 2275*l.*; the balance of 1255*l.* 14s. 3d. being carried forward to next month's account. The estimated return for the three weeks ending March 25 is—Quantity of quartz crushed, 3526 tons; gold obtained, 1478 ozs. 13 dwts., or an average per ton of 8 dwts. 9 grains. Remittance, 2200*l.*

ENGLISH AND AUSTRALIAN COPPER.—The directors have advices from their sub-manager, Port Adelaide, dated March 30. The quantity of fuel at the works was about 2500 tons. A further shipment of 6 tons of copper had been added to the shipment advised by last mail.

SCOTTISH AUSTRALIAN.—The directors have reports from Lambton Colliery to March 24. The sales of coal for February amounted to 11,890 tons.

AUSTRALIAN UNITED GOLD MINING COMPANY.—The directors have advices from Victoria to March 29.—Duke of Cornwall Mine: After referring to the engine being set to work, Mr. Kitto writes—"You can but be pleased to know that the mine continues to improve. We have now on surface about 1000 tons of stone, fully one-third of which is from Daukes' shaft. Capt. Rowe, of Mosquito Mine, 30 fms. to the south of our boundary, informs me that their mine never looked better than it does at this moment at the bottom level. Hilton and Co., proprietors of the claim adjoining Rowe's, average about 400*l.* per week between five men. This mine is 60 ft. deeper than ours. The necessary repairs to the reservoir have been executed.—Central Mine: The loadings for the machinery are nearly completed, and I trust to be able to report progress in the plant by the next mail. I anticipate from this mine great results at a comparatively small cost." Mr. Lamb, under same date, writes—"On Wednesday last our engineer got steam into the boiler, and the engine moved right off, and smoothly. The fly-wheel (60 ft. circumference) made 12 revolutions in a minute. This would give about 75 blows by each stamp-head, which, multiplied by 96, our presumed ultimate power, would produce 7200 blows per minute. You will be pleased to hear that in the south drive, in Daukes', the stone is studded with gold, as hitherto, and the stone rather increasing in quantity. In the old shaft drive it is more difficult to see the gold, on account of the oxidation, but there is an immense body of auriferous quartz there. When we are enabled to put more men on to continue the cross-cuts we shall meet with other lodes known to be payable, and at the next lower level we have every reason to believe that the gold will be heavier. People who pay us a visit from a distance, and see the quality of the stone, are astonished that this hitherto despised locality should, with proper trial, prove so rich."

QUARTZ CRUSHING MACHINERY IN ADELAIDE.—Some newly patented machinery, the invention of Mr. RAILEY, has just been erected in Adelaide. It consists of a battery of four stamps, with a drop of 11 in., cast by Jones Brothers, and the necessary adjuncts of tanks, pans, and separators. At present no ripple-table is used, but the slime on leaving the stamper bed passes through a wire netting with 900 holes to the inch, and a shute into a reservoir capable of holding one or two tons. Above this there is a wooden trough to take away the superfluous water. From the tank or reservoir the slime is shovelled on to a stage, and thence into the pans, of which there are two, capable of holding about 250 lbs. each. Here it is brought into contact with the quicksilver, of which about 50 lbs. is used for each charge and chemicals, the latter forming the material feature in Mr. Railey's patent. Here the stuff is heated by steam, and kept in a state of constant agitation for four hours, in order that the chemicals may have full play. From these closed pans or amalgamators the whole of the stuff is conveyed into a separator, a larger open vessel placed on a lower level, so as to be easily accessible. Here it is kept in constant motion for several hours, and receives about half-a-dozen charges from the amalgamators. The useless slime is flushed out through openings in the vat and carried into the spoil, whilst the amalgam is drawn off from a tap in the bottom. By means of this set of amalgamators 1½ ton of ore can be operated upon in the 24 hours, although the stamps are able to crush in the same time 4 or 5 tons. Each part of the apparatus is connected with a 10-horse engine by means of bands working on to a main shaft. The ripple-table can be used, but at present it is not thought necessary, as the pans and separators perform the work of extracting the metal from its ore very effectually. The quantity of quicksilver in use is about 300 lbs., sufficient to supply the six charges, which are run through in the six hours.

NEW PROCESS OF EXTRACTING COPPER.—An improved method of extracting copper from its ores, by the wet way, is being introduced in South Australia by Dr. COTTER and Mr. C. L. DUBOIS, which, if it proves capable of practical application generally, will be of vast importance, as the principal materials used in one part of the process are readily reproduced from resulting products. Mundic, which is as abundant in the colony as copper ore, is the basis of the process. For the sulphuret ores they roast them in a furnace or oven adapted to the purpose (adding mundic if there is not sufficient present), and a small quantity of saltpetre—8 lbs. for every 112 lbs. of sulphur present. They frequently stir or rabble, and occasionally check combustion by jets of steam or water. By this means the sulphur is converted into sulphuric acid, which unites with the copper in the ore, and forms soluable sulphate of copper. When the sulphur is all converted, which is generally accomplished in six hours, the charge is raked out into a tank of water, when it at once dissolves the sulphate of copper. The solution is drawn off into a clean tank, and precipitated by iron, which throws down the copper in a metallic state, which only requires melting and running into ingots. The result of throwing down the copper with iron is a solution of sulphate of iron. This is pumped into an evaporating pan, to reduce it to a proper strength, when it is drawn off into a boiling-vat, and being brought into a state of ebullition, the carbonate or oxide ore is thrown in, and the whole boiled until the copper is all extracted, when the liquor is run off, filtered, and the copper precipitated by metallic iron, giving pure metallic copper and sulphate of iron, which is returned to the evaporator, condensed, boiled with fresh ore, and so on *ad infinitum*; and this operation will not cost more than 25s. per ton of ore treated. At first glance it would appear that this process would be objectionable, on account of the large quantities of iron it will require, 1 ton of iron being consumed in reducing 1 ton of copper. But as regards this metal, also, it is reproductive. The iron contained in the sulphate of iron is released in the process of boiling in the form of a peroxide of iron, some of which is laid on the table. This is easily wasted away from the refuse of the ore (being a very fine impalpable powder), dried, and heated in a retort with charcoal, when it is again converted into metallic iron of the very best quality for the purposes, and used to precipitate the copper, as already explained.

Meetings of Public Companies.

PROVINCIAL BANK OF IRELAND.

The annual general meeting of shareholders was held at the bank, Old Broad-street, on Thursday,—Mr. PHILIP TWELLS in the chair.

The CHAIRMAN moved that the following gentlemen be re-elected directors:—Mr. H. R. Alexander, Mr. Henry Barnett, M.P., Mr. James Helme, and Sir Moses Montefiore, Bart., F.R.S.

The motion was unanimously agreed to.

Mr. CHRISTIE (the secretary) read the directors' report as follows:

The directors have pleasure in again meeting the proprietors, and submitting to them the results of the bank's business during the past year; before doing which they will, as usual, refer briefly to some of those circumstances which affect the prosperity of Ireland, and necessarily interest the shareholders. The great heat and long-continued dryness of the summer of 1868 were adverse to the green crops, but favourable to the yield and quality of cereals. Wheat was rather above an average in quantity, and fine in quality, and remunerated the farmer, though the price was much under that of the two previous years. Oats also were a fair average in quantity, and of good quality, and the price favourable to the seller. Barley was good, both in yield and quality, and the price remunerative. Potatoes were abundant, and notwithstanding that some portion was affected with disease, a large quantity remained sound. The acreage of land under flax was much below that of previous years, and owing to the dryness of the summer, and, in some cases, to badness of seed, the produce was much under an average, and though the price was very high, the poverty of yield made this in general an unsatisfactory crop for the grower. The protracted drought greatly lessened the demand in England for store cattle, and rendered them for a time almost unsaleable. This interrupted the extensive trade in the export of cattle from Ireland, and rendered it necessary to hold them over in that country to a larger extent than usual. The winter, however, having been unusually mild, the Irish graziers had food for their extra stock, and were able to keep the animals in good condition, and the demand for cattle at the recent spring fairs has been active, and the prices high. Owing to the drought, there was a short supply of butter, but this was almost compensated by the increased market value. On the whole, the farming classes are believed to have improved their position during the past year, and rents have been well paid. The retail trade of the country has, however, been dull, and less satisfactory than might have been expected, especially in the smaller country towns. The depression in the linen trade, noticed in last year's report, has not passed away. The scarcity, before alluded to, in the supply of home-grown flax, and the high price of that article, operated injuriously on this very important branch of trade, and though the deficiency of supply was in some measure overcome by importations from abroad, the parties engaged in its manufacture and sale have had little profit. Some hope is entertained of an improvement in the present year, consequent on an expected increase in the breadth of land sown with flax in Ireland, and on the fact that the seed is better than any imported for several years past. The rates of interest continued very low throughout the financial year of the bank, and keeping this in view, the directors are sure that the proprietors will agree with them in thinking the following statement of the year's profits very satisfactory:—

The account submitted to the yearly general meeting in May, 1868, showed the amount of rest or undivided profits March 28, 1868..					£248,717	6 11
Out of which there has been paid to the proprietors the amount of two ordinary and extraordinary dividends, as follows:—						
At Midsummer, 1868, ordinary dividend of 4 per cent.....	£21,600	0	0			
Extraordinary div. of 6 per cent...	32,400	0	0 =	£54,000	0	0
At Christmas, 1868, ordinary dividend of 4 per cent.....	£21,600	0	0			
Extraordinary div. of 6 per cent..	32,400	0	0 =	£54,000	0	0 = £108,000 0 0
Leaving balance					£140,717	6 11
To which there has since been added the amount of net profits for the year ending May 27, being the last Saturday of March, 1869, after deducting property tax, and providing for all the bad and doubtful debts					£108,188	10 7
Making the rest or undivided profits March 27, 1869.....					£248,905	17 6

The directors have, in consequence, the pleasure of announcing their intention to pay in July next, as in several past years, an extraordinary dividend of 30s. on each 100*l.* share, and 12s. on each 10*l.* share of the capital stock of the bank, in addition to the ordinary dividend of 4 per cent., making the amount to be then paid 2*l.* 10s. on each 100*l.* share, and 1*l.* on each 10*l.* share for the half-year ending at Midsummer next, and they purpose also, as heretofore, to pay the property tax for the proprietors.

The CHAIRMAN said when they remembered the circumstances of Ireland during the last six months, the extreme dryness of the summer, and other circumstances of an unfavourable nature, it was with great satisfaction that the directors found themselves enabled to lay so cheering a statement before the proprietors as that which they laid before them to-day. It was quite unnecessary for him to remind them that a dividend of 20 per cent. was a large remunerative profit for the capital they had invested in this bank. He knew that part of their satisfaction arose from the improvement which they were aware they were causing throughout Ireland; but, at the same time, their satisfaction was not diminished by the fact that their patriotism was not left to be merely its own reward. This would be the twenty-fifth half-yearly dividend at the rate of 20 per cent. per annum which the bank had paid, and he thought he might claim some credit for the directors' acting in 1857—and he could claim it with more boldness because he was not then on the board—for showing that proper feeling which ought to exist between directors and shareholders. They were, in the first place, extremely anxious to maintain the high position which the bank had then acquired, and they were also anxious that the shareholders should participate, as far as was compatible with safety, in the large profits which were made by the bank. They in that year raised the rate of dividend to 20 per cent, and it had been maintained at that rate ever since. When the profits had been less than ordinary they had found it necessary to encroach on the reserve fund to make up the large sum of 108,000*l.*, which was required to pay a dividend of 20 per cent.; but, on the other hand, this necessity had been of rare occurrence, and it was with great satisfaction he had to state that, having paid this dividend for 12 years, the amount of their "rest" was greater now than it was in the year 1857 by about 53,000*l.*, showing that the directors, while anxious to give a large dividend, were careful not to give so much as to jeopardise the position of the bank, but had a due regard to prudence. With regard to their profits during the past year, they were just sufficient to pay the dividend which was now proposed. This was very satisfactory, when they considered the state of trade and agriculture in Ireland, as detailed in the report; and also when they bore in mind that during the year the bank rate of interest had been on the average only 2*l.* 6s. per annum. The directors had done all they could to prevent the bank from suffering from this low rate of interest, and fortunately they had succeeded in not making serious bad debts, either in number or amount, and they had not had anything to encounter particularly in competition or opposition of any kind. They knew how very injuriously an unwise opposition operated sometimes upon old-established banks and indeed upon commercial companies of any kind. They had seen one result of that in the fate which had befallen a great many of the new companies which had sprung up in London within the last three or four years, which had been anxious to acquire business rather than to do only such business as could be done at a profit. But although such a mode of conducting business was suicidal, it was injurious to other companies. It was usual on these occasions to enter a little on the state of the commerce and manufactures of Ireland, and the statement which had been made in the report would explain the reason why the profits had not been larger, but it gave no cause for fear as to the future. The large amount of capital employed in the growth and manufacture of flax had not in the last year been very remunerative—the weather did not suit it, the yield was small, and the acreage less than usual. This was compensated for in some degree by the increased price of the article, but that did not make up for the deficiency in quantity. On the other hand, the manufacturers had to compete with more cotton, and the merchant who dealt in the finished article found that the prices were lower than were satisfactory to him. The manufacture, however, had much increased of late. In 1862 there were 100 flax factories in Ireland, and in 1868 there were 144. In 1862 the number of spindles was 592,981, and 905,325 in 1868; and the number of persons employed had increased in the same period from 32,000 to 60,500. He believed that a much larger acreage had been sown this year, and that the seed was of a superior character, much more attention having been paid to its selection than heretofore; and at the present time the crops were looking exceedingly good. With regard to agriculture, the rents had been paid very well, and the farmers—such of them as were keepers of stock—who were at one time in despair, were beginning to be a little more satisfied. The great drought in this kingdom prevented the importation of stock cattle to any large extent, but, fortunately, the farmers in Ireland were enabled to keep their cattle through the winter, and the prices which they now obtained for them were very satisfactory. At Ballinasloe Fair, held on the 7th of this month, all the cattle were disposed of between four and seven in the morning, and at a price which was satisfactory to the farmers. There was this to be remarked of Ireland, that the style of living was better than formerly. The people liked to have better houses and better clothing than they were content with formerly. Then there was another cheering matter with regard to emigration. During the last year the number of emigrants had fallen off from 81,724 to 62,190, and the valuation of property for the poor law had increased from 13,045,900*l.* to 13,117,000*l.*, and the increase of acreage taken into cultivation was about 94,000. There was, therefore, every reason to believe that the agriculturalists of Ireland were in a better position now than they were five or six years ago, and it was with a great feeling of satisfaction with the past, and confidence in the future, that he ventured to propose that the report be received and adopted, and if any proprietor desired any further information he should be happy to give it. (Hear.)

The motion being put, was carried unanimously.

Votes of thanks were passed to the Chairman and directors, for their continued attention to the interests of the bank.

A vote of thanks was also passed to Mr. Hewat, Mr. Christie, and the officers for the efficient manner in which they had performed their respective duties.

The meeting then separated.

PRINCE OF WALES MINING COMPANY.

A general meeting of shareholders was held at the offices, St. Michael's House, on Thursday,—Mr. J. Y. WATSON, F.G.S., in the chair.

Mr. JEHU HITCHINS (the secretary) read the notice convening the meeting, and the minutes of the last were approved.

A statement of accounts was submitted, which showed a balance of assets over liabilities of 1900*l.* 18s. 1d. The profit on the quarter amounted to 292*l.* 4s. 11d.

The agents' report was read, as follows:—

May 19.—Since the last general meeting Watson's shaft has been sunk 6 fms., being now 7 fms. below the 65, in a beautiful light blue mineralised killas, and trip-plat cut, and we hope to have the shaft 10 fms. below the 65 by the end of June. The 65 east has been driven 4 fms. 3 ft. 6 in., and the cross-course that underlies east intersected, and 4 fms. driven north on its course, and no more lode met with. In the present end east the capel part of the lode is 2½ ft. wide, with a branch on the footwall 1 ft. wide, yielding some good saving work, and likely to improve. The 65 west has been driven 7 fms. through good profitable ground; the last 2 fms. through a good course of ore, varying from 15*l.* to 50*l.* per fm. In the present end the lode is 7 ft. wide, worth 50*l.* per fm. A stope in the back of the 65 east is working by four men, lode worth 15*l.* per fm.; ditto, in 65 west, by four men, lode worth 20*l.* per fm. The 55 east is at present suspended, and the men put to cross-cut north to see if any more lode is standing in that direction. The cross-cut south in the 55 east, towards the No. 1 south lode, is driven 6 fms., through highly mineralised killas. The 55 east, on No. 2 south lode, is driven 5 fms.; lode small and poor; here we are daily expecting to cut the No. 1 cross-course west of cross-cut. The 55 west has been driven 4 fms.; the last 3 fms. by side of the lode, and where last cut into was 2½ ft. wide, composed of capel and spar, with mundic and copper ore intermixed, but not to value. The 55 cross-cut north, towards north lode, is driven 2 fms.; ground favourable, and very congenial for copper ore. The 45 west is driven 3 fms. 3 ft.; lode 3 ft. wide, composed principally of capel, with a little ore intermixed, but not to value. A stope in the back of the 45 west by four men; the lode is worth 15*l.* per fathom. A stope in back of the 45 east by two men; the lode is worth 8*l.* per fm. Three stopes in back of the 55, worth 10*l.*, 15*l.*, and 30*l.* per fm., have been suspended for the past month. The new shaft is cut down, timbered, and made good 12 fms. and hope to have it completed to the 45 by the latter part of October. In conclusion, as may be seen from above, the mine still continues to look well, and we hope to continue the present samplings.—J. GIFFORD, W. GIFFORD.

The CHAIRMAN explained that the profit of 292*l.* had really been realised during the past month, so that, however small it might appear as divided over three months, it could not fail to be encouraging as the result of one month's operations, and the ore sold for last month realised with carriage nearly 800*l.*, which he estimated would leave a profit of 250*l.*, as the entire cost, including dues, would be about 500*l.*

Mr. POWELL enquired the reason of the three stopes in the back of the 55 being suspended?—The CHAIRMAN said the reason, he imagined, was simply on account of the ore from those points not being wanted for the present—it was evident that the samplings had been kept up without those stopes. It should be observed that those stopes were at the point at which the richest ore had been taken away.

Mr. HAMILTON thought the question why the manager had suspended certain stopes—or, indeed, any question bearing upon the working of the mine—was irregular.—The CHAIRMAN said that one of the important statements in the report was that the present samplings could be kept up; and it should, moreover, be recollected that not an ounce of the ore had been taken away from between the 55 and the 65 fathom levels.

Mr. ROSEWARNE said if the one end worth 50*l.* per fathom should continue there could be no question as to the present samplings being maintained.

A SHAREHOLDER doubted whether the samplings could be kept up.

The CHAIRMAN said the same thing had been doubted for the last two years; but, notwithstanding the "doubts," the samplings had been kept up, and the present aggregate value of the different points of operation was no less than 160*l.* per fathom.

Mr. ROSEWARNE fully believed that if cross-cuts had been put out other courses of ore would have been met with long since.

The report having been received and ordered to be entered on the minutes, and the accounts passed and allowed, it was unanimously agreed, upon the proposition of the CHAIRMAN, seconded by Mr. PHILLIPS, that the balance standing to the credit of the accounts be carried forward.

The CHAIRMAN mentioned that every bill and every debt of the company was paid in cash at the end of each quarter.

A vote of thanks to the Chairman terminated the proceedings.

PROSPER UNITED MINING COMPANY.

A general meeting of shareholders was held at the offices, Austinfriars, on Wednesday,—Mr. J. B. HARTWELL in the chair.

The SECRETARY read the notice convening the meeting, which concluded as follows:—"I regret very much to inform you of the death of our purser, Mr. Charles Wescomb, and at this meeting it will be necessary to appoint his successor."

The CHAIRMAN said it was absolutely necessary that the meeting should proceed to appoint a purser to take charge of the company's financial affairs. The executors of the late Mr. Westcomb had informed Mr. Murchison that they were unable at present to furnish a balance-sheet, and, therefore, after the appointment of a purser, it would be necessary to adjourn the meeting. The first step, however, would be to read the report of the agent.

The report of the agents was read, as follows:—

May 18.—Since last general meeting Hand's engine-shaft has been sunk 2 fms. 0 ft. 10 in., lift fixed, &c., and it is now being sunk by six men, at 27*l.* per fathom. The 100 west has been driven 9 fms. 1 ft. 6 in.; the lode averaging worth 12*l.* per fathom; this end is suspended until a communication is effected with the 90. The rise and stope in the back of this level are worth 12*l.* per fathom. The 100 east, on north lode, is being driven by six men; the lode is 2 feet wide, worth 5*l.* per fathom for tin; we expect an improvement here soon, as it is getting under the run of ground which was so productive for copper in the upper levels. The stope in the bottom of this level is worth 10*l.* per fathom. The 90 west has been driven 14 fms. 5 ft. 9 in., averaging worth 10*l.* per fathom; the present end is of the same value; this end is getting close to the long run of tinny ground driven through in the 80, consequently we expect an improvement here shortly. The two stopes in the back of this level are worth 10*l.* and 12*l.* per fathom. The winze in the bottom of this level is being sunk by the side of the lode for dispatch; when last taken down it was worth 12*l.* per fathom; we hope to communicate with the stope in the back of the 100 west in about one month's time, when we shall have a valuable piece of tin ground available for stoping, and good ventilation in the 100. The 80 west has been driven 16 fms. 1 ft. 6 in.; the lode is very fluctuating in value, ranging from 5*l.* to 25*l.* per fathom, now worth 8*l.* per fm.; this end is letting out water freely, and we consider it the most important point in the mine. The rise in the back of this level is worth 6*l.* per fm. The stopes in the back of this level are worth as follows:—No. 1, 6*l.*; No. 2, 8*l.*; No. 3, 14*l.*; and No. 4, 12*l.* per fathom. The 80 west, on Pope's lode, is driven 12 fms. 2 ft. 6 in., and producing good stones of tin occasionally. The 70 west, on Pope's lode, is driven 19 fms. 3 ft. 1 in., and laying open tribute ground, which is now being worked at 13s. 4d. in 1*l.*; the end is producing saving work for tin. The 60 fm. level west, on Pope's lode, is driven 19 fathoms 3 feet 9 inches, and opening tribute ground. No. 1 winze, in bottom of this level, is worth 5*l.* per fathom, and No. 2 winze yielding some saving work for tin. The 60 west, on Gwallon lode, is being driven by six men; lode producing occasional stones of tin. The stope in bottom of this level is worth 10*l.* per fathom. The 50 west, on Gwallon lode, has been driven 9 fms. 6 ft. 6 in., and is being continued by six men; the lode is unproductive at the present time, but we are expecting an improvement shortly, as it will soon be to the west of the elvan-course, where we expect a good lode. The stope in the back of the 40, east of Lonisa's, is worth 6*l.* per fm. At Gwallon a cross-cut is being driven north by six men to prove the two north lodes, which have not been seen below the adit. The tribute department consists of 29 pitches, working by 67 men, at tributes varying from 7s. to 15s. in 1*l.*, or an average of about 12s.; these pitches are producing about the average quantity of tin. We consider the reserves in the mine equal to about six months return, or about 10,000*l.* At Hosking's the different levels on Moor lode have been extended to the cross-course, beyond which it is not prudent to go, in consequence of old Prosper Mine, immediately to the east, being full of water. Cross-cuts have been driven to the south lodes, which are poor, and the prospects not being sufficiently encouraging to warrant further outlay at present we decided on suspending operations, and allowing the water to rise to the 40. The pitwork remains in the shaft until the mine is in a better position to do speculative work; this arrangement will effect a saving of 100*l.* per month. From the foregoing you will perceive that the ends are rather poor at present, but we consider the future prospects very encouraging, as the 80 has passed through the longest and best shoot of tin ever discovered in the mine. The 90 is getting close to the dip of this shoot of tin, and improving; and the most important feature is the western ends are draining Gwallon part of the mine 200 fathoms ahead; this leads us to expect a continuation of productive ground in this direction. Gwallon was extensively worked down to the 30, and it is reported

there is a good lode for tin in the 50 fm. level end; the water is going down, and there being only 17 fathoms more to drain the eastern part we soon expect a valuable addition to our returns. Number of people employed, 378; ground spent, 917 fms. 1 ft. 3 in.—J. NICHOLLS, C. LOBB.

Mr. PETER WATSON, referring to the Gwallon part of the sett, mentioned that the general feeling in the district was that if the engine had been put at Hosking's shaft the mine at the present time would be in a very different position to that which it now occupied.

Capt. NICHOLLS considered that Gwallon would bear favourably upon the future of the company.——Mr. FAUNTLEROY proposed that Mr. Wm. Watson be appointed the purser; which, being seconded by Mr. WILDE, was put and carried unanimously.

Upon the proposition of Mr. PEARSE, seconded by Mr. DUNHAM, it was also resolved that the purser be authorised to obtain from the representatives of Mr. Wescomb all books, deeds, papers, documents, and effects belonging to the company. he meeting then adjourned to June 8.

CAPULA SILVER MINING COMPANY.

An ordinary general meeting of shareholders was held at the City Terminus Hotel, Cannon-street, on Wednesday,

Mr. JOHN CHYNOWETH in the chair.

The notice convening the meeting was read.

The report of the directors stated that the expenditure of the company during the 12 months amounted to 7620*l.* 6s. 11d., and the produce of the silver to 3610*l.* 4s. 5d., leaving a loss on the operations of the mine of 4010*l.* 2s. 6d. According to Capt. Paull's report, of March 7, the two winzes that are sunk on the ore ground in the Esperanza level are opening out very well; one of them yielded in the previous week about 10 cwts. of best ore, a half of which was characterised as very rich indeed, and the ore in the other winze was getting much richer. In his subsequent report, of March 26, he continues to speak confidently of the promising appearance of the mine. The reduction works were in progress, and are expected to be in a condition to reduce some of the ores by the end of June; but it is evident that, to accomplish this, a further supply of funds is counted upon from home. From a careful estimation of the capabilities of the first portion of the reduction works (four barrels) that will be put into operation, it is anticipated that a profit of from 8000*l.* to 9000*l.* per annum will be acquired to provide for the repayment of the debentures now proposed to be created, and for the extension of the works; so that, under these circumstances, in the course of two years the mine should become a dividend-paying concern. It is difficult to form a correct estimate of the money that will actually be required to put the reduction works into operation, but seeing that it is considered that the expenditure should not be less than 80*l.* per week, during a period of six months, this will entail the amount of 2080*l.*; the machinery and implements that will be required will probably cost 1000*l.*; quicksilver, salt, &c., for the use of four barrels, 620*l.*=3700*l.* The probability, therefore, is that 5000*l.* will suffice to render the mine profitable; and looking at the present features of the concern, as set forth in the reports, the directors believe that the success of the undertaking is in nowise problematical.

The CHAIRMAN very much regretted the circumstance which had placed him in the position he occupied upon the present occasion, because it pointed to the absence of a friend who had been taken from them, and whose loss, perhaps, was more forcibly felt at this moment than at any other time, inasmuch as he (the Chairman) could but imperfectly discharge the duties which the late Mr. Phillips so fully understood, and so ably performed, and he was sure that everyone present felt the deepest sympathy with his family for the irreparable bereavement they had sustained. (Hear, hear.) As to the position and prospects of the company, the report of the directors embraced all the board had to communicate, and, therefore, it would only be uselessly taking up the time of the meeting were he to recapitulate the different points to which reference had been therein made. He might, however, direct particular attention to the circumstance that during the past year the operations at the mine had yielded nearly 5000*l.*—which it should be recollected was obtained from one point only, and even that worked to a very limited extent. That, he took it, was irrefragible evidence as to the actual capabilities of the property, without considering the fact that there were many other points of exploration which, although as yet but developed to a very small extent, presented not only encouraging indications, but had yielded ore. Those operations, however, they had very unwillingly suspended, on account of financial difficulties, such surplus capital as they had at command being directed to the completion of the reduction-works, which, he was glad to be in a position to state, was progressing satisfactorily, and in less than two months would be in operation. At the end of last year they had been brought to a standstill with respect to the reduction of their ores, but he did not know that he need further allude to that circumstance, as it had been fully referred to in the circular letter forwarded to the shareholders some time since. The accounts submitted showed that at the end of last year there was a credit balance of something like 1300*l.* in London and Mexico, against which there was a credit in favour of the manager in Capula—which was a debit of the company—of about 300*l.* The call since made of 2s. 6d. per share had brought 2300*l.*, including the forfeited shares. The whole of that amount had been sent to Mexico for the purposes of the reduction works, and taking into account the expense of working the mine, and of completing the hacienda, he computed they would be just able to carry on their operations until the end of June. So that, unless the manager could obtain from the mine the means of further prosecuting the works the whole affair would be brought to a standstill. Bearing that fact in mind, the board considered that it would be better to make some provision to meet any contingency that might arise from want of capital. He strongly urged that there should be unanimity in their action, because they could not look for outside assistance. Bearing that fact in mind, some of the principal shareholders were consulted a few weeks since as to the best mode of raising additional means to carry on the works, and it was suggested that power should be taken to raise 10,000*l.* on debentures, although it was not the intention of the board to call up more than 5000*l.* In reply to the appeal in March, that the 5000 unallotted shares should be issued as preference, sufficient response was not made to legalise the issue. For that reason the directors had decided that they would appeal to the shareholders, to enable them to come to some decision on the matter. Having read the paragraph in the report relating to the terms upon which it was proposed to issue the debentures, he moved—"That the report and balance-sheet be received and adopted, and that the directors be empowered to create 1000 debentures of 10*l.* each, to bear interest at the rate of 8*l.* per cent. per annum, payable half-yearly; a moiety of the amount of each debenture only to be paid in the first instance—namely, 2*l.* 10s. on application, and 2*l.* 10s. three months after the date of allotment; the remaining 5*l.* to be called up at the discretion of the directors, in amounts not exceeding 2*l.* 10s. each, nor within a less interval than three months after the last payment. The debentures to be redeemed at such periods as the directors may determine, with a bonus of 50 per cent. on the amount paid thereon."

Mr. HILL thought the shareholders should have some assurance that the capital now proposed to be raised should be expended upon the completion of the hacienda, by which there were solid grounds for believing the enterprise would prove a substantial success.——Col. JAMESON considered the whole question was one of confidence in the manager in Mexico.

Mr. SWAFFIELD seconded the proposition for the adoption of the report and balance-sheet. Of course it was very provoking to be called upon to subscribe for more capital, but still they had the satisfaction of knowing that at no previous period was the position and prospects of the company equal to what they were at the present time. Notwithstanding untoward difficulties, the net returns had progressively increased, and he considered that they entered upon the present year under far more encouraging auspices than hitherto. Although there was no question the operations were being somewhat crippled, by reason of insufficient capital, yet he did not take quite such an unfavourable view of the financial position of the company as that indicated by the Chairman.

Mr. BELL (a director) drew attention to the fact that the yield of ore had proved of much greater value than Capt. Paull had calculated upon. According to the present yield, the working of four barrels pointed to the realisation of a profit of 1300*l.* per year. If those four barrels went to work in July, he should suppose that four others would be at work by the end of the year; and supposing the yield of ore was sufficient to keep the eight barrels at work, they might fairly look for an income of (say) 2500*l.* He had alluded to this fact because the ore had proved of a much better yield than Capt. Paull had estimated.

Mr. REED wished to know if the shareholders were liable to pay for the debentures proposed to be issued in the event of the mine failing to yield profits?

The SOLICITOR explained that no member could under any circumstances be made liable for any amount beyond his original subscription.

Mr. REED then proposed, as an amendment, "That the amount to be raised upon debenture be limited to 5000*l.*, instead of 10,000*l.*"

Colonel JAMESON seconded the amendment.

Mr. FAWCETT thought the amendment suggested the idea of a want of confidence in the board. It was admitted by all parties that the mine was never in a more favourable position as at the present moment. He had heard a very eminent mining man (Mr. John Taylor) confirm the opinion that the mine would prove a success if there were sufficient means to carry out the objects. He had merely mentioned that fact to show that the property was held to be one that required due development to produce successful results.

Mr. REED said that if it were thought his amendment reflected upon the board he would withdraw it; but the seconder not acquiescing, the amendment was then put, and lost; when the original resolution was put, and carried unanimously.

The retiring directors were re-elected, and the auditors were re-appointed.

The SOLICITOR, in reply to a question, stated that a debenture-certificate would be issued, with the conditions attached.

The CHAIRMAN urged the support of the shareholders in the raising of the additional capital. His colleagues and himself were prepared to take their full quota of debentures if supported by the shareholders. If the proposed amount be not forthcoming the company would be exposed to some risk of falling through.

A vote of thanks to the Chairman and directors concluded the proceedings.

THE PIG-IRON AND ORE PRODUCT OF THE UNITED STATES.—For the year 1868 the pig-iron production of the United States, in kind and quantity was— Anthracite..... 893,000
Raw coal and Coke.... 340,000
Charcoal..... 370,000=1,603,000 tons.

Of the anthracite pig, Pennsylvania produced 671,955 tons, equal to 75 per cent. Of the raw coal and coke pig, Pennsylvania produced 194,000 tons, equal to 57 per cent. Of the charcoal pig, Pennsylvania produced 59,600 tons, equal to 16 per cent. As the pig-iron product of Great Britain for 1868 was 4,800,000 tons, the United States product (1,603,000 tons) was equal to 33 per cent. of that of Great Britain, which, all things considered, is a yield full of encouragement and promise. The quantity of iron smelted in Great Britain in 1868 was 12,000,000 tons, the product of which was 40 per cent. of metallic iron. Supposing that the average yield of American ores is about the same percentage as the British, it would appear that there were smelted in the United States, in 1868, of iron ore 4,009,000 tons. And as the whole pig-iron product of Pennsylvania for 1868 was 925,555 tons, or 57 per cent. of the product of the United States, the same percentage would make the quantity of iron ore smelted in Pennsylvania for the year 2,285,130 tons. The bulk of this ore is mined in Pennsylvania, though a large quantity of ore is imported from New Jersey, into the Lehigh Valley. Ore is also received from New York and Lake Superior. According to the railroad reports made to the Auditor-General of Pennsylvania for 1868, the quantity of iron ore transported by rail was 1,751,970 tons. Considerable quantities of iron ores were carried on the canals. Some, too, was hauled in wagons from the pits to the furnaces.—*United States Railroad and Mining Register.*

FOREIGN MINING AND METALLURGY.

A good deal of competition is remarked among Belgian coal extractors as regards the renewal of contracts, while hesitation prevails among purchasers. Some companies have announced that they have decided not to enter into engagements at present prices for the winter; but it would seem that these are exceptions, and that, as a general rule, extractors, uneasy as to the future, are disposed to make concessions. Deliveries by water, as well as by railway, show little activity, and the only animation observable relates to the delivery of coal for industrial purposes. By a royal decree, dated April 19, 1869, a concession was granted to M. Plumat and certain associates of certain coal-bearings extending over 3056 acres, under the communes of Nimy-Maisières and Mons. By another royal decree of the same date a concession was granted to the Société Anonyme des Produits of coal-bearings extending over 540 acres, under the commune of Ghlin and Mons. By another royal decree of the same date a concession was granted to the Société des Charbonnages du Nord du Flenu of coal-bearings extending over 4618 acres, in the communes of Ghlin, Mons, Nimy-Maisières, Erbesœul, and Masnuy St. Jean. By a royal decree dated April 22, 1869, a concession was granted of coal-bearings extending over 1180 acres, in the communes of Fontaine l'Eveque, Anderlues, and Leernes. There is little or no change in the state of the Belgian iron trade. As has already been stated, the Belgian rolling-mills have employment assured for the whole year, and to such an extent that it would be impossible for them to accept an order even of little importance to be executed in the course of 1869. As regards the rolling-mills producing merchants' iron, they are well provided with orders, and their operations present a very satisfactory activity. Plates are at present in great demand, and are dealt in at very remunerative rates. The blast-furnaces are relieved of their stock, and are so active that the establishment of some new ones in certain groups has now become a question under their consideration. A contract is reported to be in course of negociation for Russian railways; the amount of this contract is 15,000 tons, and deliveries are to be made in 1870. We announced recently that a contract for 4000 tons of rails had been concluded for the firm of Lebon and Otlet; we should now state that these rails are required not for the Lille and Valenciennes line, but for the second and third sections of the line from Ostend to Armentières. It seems extremely doubtful whether, in consequence of the heavy import duties which have to be sustained, Belgian iron can successfully compete with French iron in France. A report by M. Descamps, on certain amendments proposed in the budget of public works, contains several passages of very great importance to the metallurgical interest. "The price of rails," says M. Descamps, "has experienced since the adjudication, which took place on February 2, 1869, an extraordinary advance, having risen—in fact, about 30 per cent. since the preceding contract was let. This unexpected advance, which indicates a notable amelioration in the state of one of our most important industries—an improvement which will shortly react in the most efficacious manner on the earnings of the State lines—has at the same time occasioned an insufficiency of budgetary resources, which it is important to fill up, in order to provide for renewals, recognised as indispensable; this insufficiency is estimated at 6360*l.* Further, the administration having had occasion to indicate by a recent examination of the permanent way, the excellent results which may be anticipated from the use of hammered rails, proposes to enforce the process of hammering in the manufacture of 7000 tons of rails remaining to be let. It has accordingly provided with this object for a supplementary expenditure of 984*l.*, which carries to 7344*l.* the total amount of the credit required by the first amendment. It will be remembered that the Central Section, charged with the examination of the budget of the current year, had indicated the remarkable advantages obtained by the Great Central Belgian Railway Company from the employment of hammered rails. While a waste of about 15 per cent. was indicated at the end of the first year's guarantee on the contracts of ordinary rails, the waste reported on the expiration of the same lapse of time on a contract for hammered rails was only 1·64 per cent. The Central Section, then, congratulated the Government on the praiseworthy measure which it has taken, and the Chamber will be disposed, we doubt not, to encourage the administration in all the efforts which it may make to secure, even at the cost of certain temporary sacrifices, the improvement and consolidation of the *materiel* of our iron ways. The employment of hammered rails of good manufacture will enable the Government to proceed gradually with the substitution of steel for iron in the renewal of way. Furnished with a more solid *materiel*, it will be enabled to wait, with less prejudice to the public service, a notable reduction in the difference between the prices of steel and iron. Thus, the Central Section remarks with astonishment that the Department of Public Works solicits for 1870 the same credits as for 1869, which would imply an intention to put in adjudication towards the close of the present exercise 40,000 rails of ordinary manufacture, and only 7000 rails of hammered iron or steel, according as economies may be realised or not in certain budgetary credits. The Central Section finds it difficult to understand how it is that the Government persists in supplying itself to so large an extent with ordinary rails, when relatively more advantageous results have been obtained by the employment of hammered rails. The Section accordingly decided to address the following question to the Minister of Public Works:—'By virtue of the first amendment, the Government solicits a credit of 6360*l.*, in order to cover the insufficiency which has resulted from the last adjudication of 40,000 ordinary rails; it applies, besides, for another supplementary credit of 984*l.*, in order to admit of the 7000 rails remaining to be let being hammered. The Government, foreseeing the maintenance of prices at the same rate during the current year, solicits the same credits for 1870. Does it propose, also, to let next year 40,000 ordinary rails, and 7000 hammered rails? Or, is it not rather by error that it has neglected to apply for sufficient credits in order to admit of the contract which will be put in adjudication being composed entirely, or at least in a very great proportion, of hammered rails?' The Minister of Public Works replied that it is the intention of the Government to let for next year contracts for hammered rails, and even for steel rails, if the resources of the Treasury permit of the introduction of this great improvement. But the Minister urged that there is ground for considering to what extent the ordinary budgets should support, on the occasion of renewals, considerable supplementary expenses, which may be regarded as first-establishment charges. The Minister added that under any circumstances the Government proposes to lay down rolled rails of heavier weight. The Central Section observed that if, as there is every reason to believe, the favourable opinion expressed by the administration on the advantages of employing hammered rails is confirmed in the course of the present year the Government must, before proceeding with fresh adjudications, solve through the medium of the Legislature the question raised in the despatch addressed to it."

There is little change to note in the state of the French siderurgical markets. Employment is abundant at almost all the works, and it would be difficult for several of them to accept orders to be executed within a given period. Prices have not varied to any extent of late. During the past year 54 engines were added to the rolling stock of the Paris, Lyons, and Mediterranean Railway Company—three passenger engines, and 51 goods engines. The company's rolling stock was increased by two passenger carriages and 2809 goods wagons of various models. Orders have now been given for execution during the current year for 99 engines—26 passenger engines, and and 73 goods engines; three passenger carriages, and 2150 goods trucks.

FOREIGN MINES.

ST. JOHN DEL REY.—The directors have received the following report, dated Morro Velho, March 29, and April 17:—Morro Velho produce for the second division of March (11 days), 2672 oits., from 1858·8 tons of ore; yield 1·437 oits. per ton. Morro Velho cost for March, 455*l.* 5s. 10d.; loss for ditto, 968*l.* 17s. 7d. Fernam Paes Estate cost for March, 465*l.* 5s, 6d.; profit for ditto, 41*l.* 2s. 10d. Gaia produce for March (11 days), 488 oits., from 342 tons of stone; yield 1·427 oits. per ton. Morro Velho produce for the first division of April (11 days), 2716 oits., from 1791·2 tons of stone; yield 1·516 oits. per ton. Gaia produce for April (11 days), 433 oits., from 355 tons of stone; yield, 1·211 oits. per ton. The produce from the Praia Works was 825 oits.

TAQUARIL GOLD.—Capt. Thomas Treloar advises, by the mail just come to hand, that he has made arrangements for taking charge of this company's property; and Messrs. John Moore and Co. report that the Council of State has sanctioned the Government grant.

SAO VICENTE.—The directors have received advices from their superintendent in Brazil, dated March 31. The produce for this month is very small, owing to our having stamped only killas at Hill's stamps during the 20 days they have been working. The stone is being allowed to accumulate, and will be stamped separately to test its quality. We have cleaned some sand up which remained in the tank when we suspended stamping in December. The proceeds, 66 oits., appear in this month's produce.—Produce: The gold return amounts to 134 oits.—sand in tanks from December, 66 oits.; killas stamped, 68 oits.—134 oits.—First Division of April: We have finished stamping the killas, and on the 9th commenced stamping the lode stone. Works are at present much retarded, owing to many of our borers having been taken as soldiers on the 12th, and their places have not yet been filled up.

IMPERIAL SILVER QUARRIES.—L. Chalmers, April 19: Twelve feet of tunnel were made last week. We are still in the Trachitia tufa.

ALAMILLOS.—May 12: The lode in the 4th level, west from San Rafael shaft, is large, and very regular, yielding ¾ ton of ore per fathom. The 4th level, east of La Magdalena shaft, produces ½ ton per fathom; the ground is hard for driving, but the lode is improving. The lode in the 5th level, east of this shaft, is split into branches, and is valueless. The 5th level, west of La Magdalena shaft, is worth 1½ ton of ore per fathom; the lode has decreased in size, but is still well defined, and looks well. In the 5th level, east of Taylor's shaft, we have intersected some branches, and are now close to the main lode. The lode in the 6th level, east of Taylor's, is small and poor. The lode in the 5th level, west of Taylor's, is composed of quartz, which is hard to drive. The lode in the 6th level, west of Taylor's, is unproductive, and very wet. The 4th level, west of San Adriano shaft, is worth 1 ton of ore per fathom; the ground is easy for driving, and the lode is of a promising character. The lode in the 3d level, west of San Yago shaft, is large, composed of carbonate of lime, with spots of ore. The second level, east of Cox's shaft, yields 1 ton of ore per fathom; the lode has improved, and the ground is good for driving. In the 2d level, west of Cox's shaft, the lode is large, and spotted with lead, but is unproductive. The 2d level, east of Judd's, has become unproductive within the past few days.—Shafts and Winzes: In La Magdalena shaft, sinking below the 5th level, the men are making fair progress in sinking; the water is increasing. In San Adriano shaft, below the 4th level, the main part of the lode is now north of the shaft, the underlie being in that direction. Pablo's winze, sinking below the 3d level, yields ¾ ton of ore per fathom; the lode is small at present, and the granite is hard for sinking. Gandia's winze is communicated to the 3d level.

LINARES.—May 12: West of Engine-Shaft: In the 100, driving west of St. Tomas engine-shaft, the lode is quite unproductive. The lode in the 85, West of Warne's-engine-shaft, is large and strong, and yielding good stones of ore. The 45, east from San Francisco shaft, is worth 1 ton of ore per fathom. this end is opening up moderately productive ground. The lode in the 31, east of San Francisco shaft, is small, consisting of quartz and lead ore, yielding of the latter 1 ton per fathom. The ground in the 25, east of the above shaft, is very unsettled, and the lode is small and poor.—Winzes: No. 166 winze, sinking below the 31, is worth 1 ton of ore per fathom; the lode is very regular, consisting of quartz and lead ore. No. 167 winze, below the 45 fathom level, produces 2 tons of ore per fathom; the lode is compact and solid, and looks very kindly.—Los Quinientos Mine: In the 45, west of Taylor's engine-shaft, there has been till within the last few days a splendid lode; it is now, however, unproductive. The 45, east of Taylor's, is unproductive. The 32, east of Taylor's, yields 1 ton of ore per fathom; the upper part of this end is in old works. In the 32, west of Taylor's, the lode, which yields ¾ ton of ore per fathom, continues large and strong. The 32, west of Cox's shaft, produces 3 tons of ore per fathom; the lode is compact and solid, and the ground is easy for driving The lode in the 32, east of Cox's, is improving in appearance.—Shaft: In San Carlos shaft, sinking below the 20, the lode is disarranged, and the ground is not so easy for sinking as it was.

FORTUNA.—May 12: Canada Incosa: The 110 fm. level, driving west of O'Shea's shaft, yields 1 ton of ore per fathom; the lode is large, producing good stones of lead. The 100, west of Henty's shaft, is worth ¾ ton of ore per fathom; the lode is small and irregular at present, but we expect it will speedily improve. The 90, west of Judd's, is suspended whilst the men rise in the back, against Primero's winze. The lode in the 90, east of Addis's shaft, is large, and of a kindly appearance, producing ¾ ton of ore per fathom. The ground in 80, the south of Henty's shaft, is very hard for driving. The 50, east of San Pedro's shaft, yields 1 ton of ore per fathom; the lode is not looking so promising as it has been. In the 80, west of Lowndes' shaft, the lode contains stones of ore, but not sufficient to attach a value to. The 80, east of Lowndes' shaft, produces ¾ ton of ore per fathom; the lode is strong, and of great promise. The ground in the 70, east of Carro's shaft, is rather hard, and the lode is small, yielding, however, 1 ton of ore per fathom.—Shafts and Winzes: In O'Shea's shaft, sinking below the 110 fm. level, we have put a new party of men, in order to get on faster with the sinking. Henty's shaft, sinking below the 100, being off the lode and in hard granite, is rather difficult to sink. Pueba's winze is completed to the 110 fm. level, and the men are put to drive east, to meet the end west from O'Shea's shaft; the lode is worth 1 ton per fathom. Primera's winze, below the 80, yields 1½ ton per fathom. The men are rising against this from the back of the 90. Abral's winze, below the 90, produces 1½ ton per fathom; this new winze, situated west of Henty's shaft, is going down at a speedy rate, and in a good lode.—Los Salidos Mine: There is no change to notice in the 100 fm. level, west of Morris's engine-shaft. In the 90, west of Buenos Amigos shaft, we expect to reach the cross-course by the end of the month, beyond which there is a good lode. The 75, west of Buenos Amigos shaft, is worth 1¼ ton of ore per fathom; this is opening good quality tribute ground, although the lode is not so rich as it was. The 100 fm. level, east of San Gabriel shaft, is in a large cross-course at present. The 90, east of Cox's shaft, yields 2½ tons of ore per fathom; there is a splendid lode in the back of the end, but downward it is not so solid. The 75, east of San Pablos shaft, is also worth 2½ tons of ore per fathom; this is opening a good length of valuable tribute ground.—Shafts and Winzes: Buenos Amigos shaft, sinking below the 90 fm. level, is worth 1½ ton of ore per fathom; the lode is again improving in this shaft, and having changed the men we hope to make greater progress. San Carlos shaft is going down in a compact and very promising lode, worth 1¼ ton of ore per fathom. San Pablos shaft, sinking below the 75, yields 3 tons per fathom: the lode is large and strong, but not quite so solid as it was. Murillo's winze is completed to the 90, and the men are put to drive east, to meet the same level coming towards it; the lode is worth 1¾ ton of ore per fathom. The lode in Colon's winze, below the 90 fm. level, is disarranged, being split into several branches, which yield ¾ ton of ore per fathom. In Pagasta's winze, below the 90, the lode is small and unproductive. The weekly weighings were well kept up in the past month, and the stopes are looking much as usual, at present enabling us to estimate the raisings for May (five weeks) at 450 tons. The surface works and machinery are going on with perfect regularity.

CAPE COPPER.—J. Williams, Ookiep, April 10: During the past month the shaftmen have been engaged in cutting a plat in the 40 fm. level (at 20*l.* per cubic fathom), which will take nearly another month more to complete. The 40 fm. level, east from No. 4 winze, has been extended 5 ft. 8 in. during the past month in very hard granulated quartz rock; we have from 6 to 7 fathoms more to drive to communicate to the engine-shaft, which will take about three months more to accomplish; set, April 1, to two men and four labourers, at 28*l.* per fathom, for 2 fathoms, or the month. The 30 west during the past month has been extended 1 fm. 5 in., in quartz rock, with occasional spots of copper ore, and should the course of ore in the level above hold down, we may expect to meet with the same run in this level shortly; re-set, April 1, to one man and one labourer, at 20*l.* per fathom, 1 fathom, or the month. The 30, south-west from the engine-shaft, has been extended during the past month 5 ft. 9 in. in very hard quartz rock. We have about 10 fathoms more to drive to intersect the south mineral course, should it hold down to this level; re-set, April 1, to one man and one labourer, at 20*l.* per fathom, for 1 fathom, or the month. The stopes in the back of the 30 are looking very well, and will yield about 10 tons per fathom; working by one miner and five labourers on day wages. The 20 west, on the south mineral course, has been extended during the past month 5 ft. 8 in. without any change; re-set, April 1, to one man and one labourer, at 20*l.* per fathom, for 1 fathom, or the month. In the 20, driving south on the flookan course, we have just met with a good stone of copper ore, but have not seen enough of it to say what it is likely to make; this end during the past month has been extended 3 fathoms 1 ft. 2 in. We have thought it advisable to suspend the 20, driving north on the flookan course, for the time, as there was no improvement in that end, and put the men in the 20 south to facilitate the opening up of this level; re-set, April 1, to two men and two labourers, at 8*l.* per fathom, for 5 fathoms, or the month. The 20, driving east from the eastern flookan course, has been extended 3 fms. 3 ft. 6 in during the past month. In the last 3 ft. the branch has improved, and will now yield from 5 to 6 cwts. of copper per fathom; re-set, April 1, to one man and one labourer, at 7*l.* per fathom, for 3 fathoms, or the month. The stopes in the bottom of the 20, west from No. 3 winze, will yield about 10 tons of copper ore per fathom; re-set, April 1, to two men and two labourers, at 3*l.* per fathom for 20 fathoms, or the month. The stopes in the back of the 20 are looking very well, and will yield about 8 tons of copper ore per fathom. These stopes are worked by native labourers, directed by two English miners, on day wages. March extract 480 tons, of 2352 lbs., or 540 tons of 2240 lbs.; average per cent., 33·5. The further trials of the traction-engine were proceeding satisfactorily. The disease among the contractor's mules was declining. Bills of lading are received for 55 tons of ore per present steamer. The Ocean King has arrived at Swansea with 615 tons of copper ore.

REPORT ON TRIAL MINES FOR FIRST QUARTER OF 1869.

— John Williams, April 10: Nababeep: The level being driven east from Price's shaft has been extended 4 fms. 4 ft. during the first quarter, through ore ground that has yielded about 2 tons of copper ore per fathom, worth from 10 to 12 per cent., that would pay well if we had the adequate machinery on the mine for dressing; it is a very kindly end, and promising to improve; set to one man and three labourers, at 10*l.* per fathom, for 2 fms. or the month, and 5*l.* per ton for ore of 30 per cent.—Kopperberg: The adit level cross-cut has been extended north, during the three months, 14 fms. 3 ft., through moderately easy ground; we have about 5 or 6 fms. more to drive to cut the lode, and about 12 fms. east on its course to come under the shaft. I set an end to drive west on the north mineral course in the side of the western mountain, from the old tributers' workings, at 6*l.* per fathom, for 3 fms. or the month, and 5*l.* per ton for ore of 30 per cent.; the end is producing a small quantity of rich copper ore, and looking very promising.—Springbok: The cross-cut level north has been extended 6 fms. 2 ft. 6 in. during the past quarter, through moderately easy ground, showing light copper stains in the cleavage of the rock; re-set, April 1, to one man and one labourer, at 10*l.* per fathom, for 2 fms. or the month. We have one man and one labourer stoping a piece of ground in the west part of the mine, on the old mineral course, from which we have raised about 2 tons of rich copper ore; stoping at 2*l.* per fathom. We shall be in a position to commence driving a level west on its course by the end of another week.

GONNESA.—Captain R. W. Rickard, May 10: San Giovanni Mine: Taylor's level was extended during April 5·50 metres on the course of the lode, 3 metres of which produced at the rate of 1¼ ton of ore per fathom; the remainder was poor. The end of the level at this time is in kindly but unproductive ground. By taking down a piece of orey ground that was left standing by the side of the level, we find that a north branch has joined the lode at about 8 metres behind the end, and have decided on extending a level eastward on its course to prove its importance. In the end of the level on the course of this north branch or lode there is a little ore. A company of tributers have opened out a little lately on the lode that was intersected two months ago in Victor Emanuel cross-cut south; where the tributers are working on it now it yields 1½ ton of ore per fathom, whereas it was small and poor at the point of intersection. The stopes and tribute pitches in this mine are looking well.—San Giovaneddu: The 30 metre level was extended 6 metres westwards last month, in ground that yields 1 ton per fathom. The 50 was lengthened eastwards 4·50 metres, in ground that yields 1 ton per fathom. The Fortuna level, from surface, was extended 14 metres last month, having entered a good channel of ground.—Monte Cane Mine: The tributers are raising about the usual quantity of lead ore, at 100 frs. per ton average tribute.—Monte Zipperi: About thirty men are employed here; and we think the results of the last month's work has proved that the ground between the two adit levels in this mine is susceptible of being worked on tribute, with profit to the company and fair remuneration to the miner.—Aqua Rest: The large lode at Campo Spino is turning out great quantities of calamine ore. There is, however, a large proportion of silicate of zinc, which loses but very little in calcining, consequently it tends to lower the average percentage of the ore. We have made some trials on the No. 2 Campo Spino lode, and have found calamine in it in several places. This lode will not, probably, prove so very productive as the one on which we are now working, but we think will yield a great deal of calamine of fair quality. At San Giorgio we have raised about the usual quantity of ore; our stopes are in good order, and are being worked regularly. At Scalitas we have completed the building of the furnace and the erection of the suspension railroad; they are both in full work at this time, and act quite to our satisfaction. From this part of the mine we hope to return 200 tons of good calamine this month.—Guttura Pala: Two companies of tributers raised about 80 tons of calamine of good quality on the No. 1 lode, near Garrucciu's shaft. Our returns for April were 449 tons of lead ore, and 1170 tons of calcined calamine.

WEST CANADA.—F. Williams, April 15: Huron Copper Bay: The stope in the bottom of the 20 fm. level, east of Stephens's winze, has very much improved of late, and it will at the present time yield 3 tons of ore per fathom. The stope below the 20, west of Palmer's shaft, is worth 2½ tons per fathom. The stope in the bottom of the 20, east of this shaft, is now much improved, and the lode wider; it will yield 3 tons of ore per fathom. The stope in the bottom of the 35, east of this shaft, is worth 2 tons of ore per fathom. The stope in the bottom of the 20, east and west of Powell's winze, on the Fire lode, will yield 2½ tons per fathom. The lode in the 60, west of Bray's engine-shaft, still continues unproductive. The stope over the 35, east of this shaft, will yield 3 tons of ore per fathom. The lode in the winze sinking below the 35, east of this shaft, continues much the same with regard to its productiveness, and still yields 3 tons of ore per fathom.—Wellington Mine: The stope below the 30, east of Mitchell's shaft, is worth 2 tons of ore per fathom. The stope in the bottom of the 24 will yield 2 tons of ore per fathom. The lode in the 24, east of this shaft, is not quite so productive as when last reported, it is now worth 1½ ton of ore per fathom. The stope east of Rowe's shaft will yield 2¼ tons of ore per fathom. The stope west of this shaft will yield over 2 tons of ore per fathom. The stope in the back, west of this shaft, still yields 1¾ ton of ore per fathom.

Messrs. Garnock, Bibby, and Co. (May 19) state that prices of cordage and bolt-rope are reduced 2*l.* per ton.

The Polbreen Tin Mine,

IN THE PARISH OF ST. AGNES, CORNWALL.

IN 2000 SHARES, OF £3 PAID.

CONDUCTED ON THE COST-BOOK SYSTEM.

This extremely valuable property is situate in the parish of St. Agnes, famed in mining records as the district whose mineral riches are found to be inexhaustible. Some of the tin mines in this parish have been worked for more than 200 years, and are still returning annual fortunes to their owners. These, as may be supposed, are in the hands of the old county families, and it is rare for the public to have an opportunity, as in the present instance, of benefiting by a share in the countless wealth that lies beneath the soil of this extraordinary district.

POLBREEN lies in the very centre of a number of tin mines, whose names are always favourably occupying the public eye. Just to the east stand Wheal Kitty, Penhalls, and Blue Hills. The two former have declared dividends already in the present year; and on the latter only 5s. per share has yet been called up. Wheal Trevaunance, close on the north, a little plot of 3¼ acres, has yielded to its proprietor the magnificent return of £200,000, and has not ceased to present a grand outcome up to this day. Immediately at hand is Wheal Coit, another old mine, one of the best in Cornwall, the profits from which seem as if they never would end. Polberrow, to the north, has been worked for a couple of centuries, having paid large sums, and is still going on with the best prospects for its shareholders. Westwards lie Wheal Charlotte and Wheal Towan (both of ascertained large productiveness), and South Polberrow, just about to be worked. All these are so many proofs of the mineral wealth known to be deposited within the parish of St. Agnes, and all are yielding vast profits, or are on the sure road for doing so.

Captain JOHN NANCARROW, the eminent mining engineer, gives his opinion of the sett, after a personal and minute inspection only a few days ago, in the following terms:—

Camborne, May 11.—Polbreen is situate in the parish of St. Agnes, and extends from the Beacon eastward. Near this hill tin mines have been worked for centuries, and the yield and profits have been enormous. The sett contains five lodes, running east and west, parallel with those of Polbreen Consols, Trevaunance, and other mines to the north, which are so exceedingly rich. These lodes are intersected by cross-courses, about which deposits of tin are usually found. The stratum is killas, which is the tin-bearing ground of the district. There is an adit, or day level, 28 fms. from surface. Polbreen began to be worked very early, and has continued to be worked at intervals, but these operations have generally been shallow, on a small scale, and with little capital, and, consequently, the whole has been done at a great disadvantage. Still the lodes have given abundant proof of their richness, and well repaid the outlay at a time when the price of tin was much lower than it is now. They only ceased to be worked when the market for tin was at its lowest ebb. The deepest workings in the mine are at the 32 (or 60 fms. from surface), except near the eastern boundary, where a shaft is sunk 20 fms. deeper, and a little work done on one lode only. The western part of the sett is unexplored, except near the surface. The lodes present the prospect of being quite as good in the future as they were in the past, and there is ground that may be worked on tribute almost at once. To give the property the trial it deserves the engine-shaft (which is 170 fms. from the eastern boundary) should be sunk, and the levels driven on the lodes, especially westward, where good returns are likely to be made. Some of these lodes are converging towards each other as they go down, and will intersect each other in sinking a little further, at which point valuable tin ground may be expected to be met with, as is usual in such circumstances. There is a 36-inch pumping-engine erected on the mine, and another engine-house, with boiler-houses attached, counting-house, smiths' and carpenters' shops, changing-house, &c. Polbreen possesses advantages peculiarly its own, for its situation, geologically and locally, is one of the best in this rich district. The position of the lodes, the strata in which they are embedded, their numerous intersections, and their proved character, all tend to ensure their productiveness. There is work done in erections, sinking of shafts, &c., which has cost thousands of pounds, all which will be available for future operations. The tinstuff raised is rich, so that it will cost but little in dressing, and the tin itself is of a very superior quality. The water below the adit is little, consequently the cost of pumping will be small. There is a shipping port near, from which materials may be obtained with little cost of carriage, and the dues will be only 1-20th. Polbreen strongly recommends itself, and all the circumstances irresistibly point to the conclusion that an excellent mine is before the proprietors. JOHN NANCARROW.

Polbreen includes within its bounds five lodes, every one of which, by actual though imperfect working, has given full proof of being capable of rewarding to the utmost any possibly requisite outlay. What has hitherto been treated as the principal lode is known as Wheal Kitty, and is doubtless a continuation of the mineral sett of that dividend-paying mine. A good deal has been done on the lode, called after the mine, the Polbreen lode, at the shallow levels of 12 and 24 fathoms, and the returns at that slight depth have been satisfactory beyond all measure. Three out of the five lodes have scarcely been touched. One of the past proprietors realised £30,000 in a very short time out of the little he attempted. That so much was gained by so small an effort is accounted for by the tin produced being equal to the very best in the county.

The mine now requires very little to bring it again into a dividend-paying condition. A 36-inch engine, fit for use, stands in the engine-house; smiths' and carpenters' shops, counting-house, and other necessary buildings, are all ready for immediate operations. After a little while the mine will be paying its own expenses, and within a very few months Polbreen will rank high in the list of dividend-paying mines, holding out an annual per centage on the capital of the early shareholders far surpassing the dividends to be derived from any other species of investment.

Polbreen, then, offers an inducement to investors of moderate means that is seldom to be met with. The sett, as shown above, lies in the very midst of what is significantly termed the "tin ground" of Cornwall. The parish of St. Agnes has put millions into the purses of owners, and shareholders, and miners in the past, and stands foremost as a mineral district to this present day. Polbreen is circled round by a cluster of mines, some of which are making enormous returns, a large number paying dividends from 50 to 5000 per cent., and the shares of those that are only in a progressive state are selling at a premium.

Polbreen is worked on the Cost-book System, so that every shareholder must be aware of and can check his liability to a shilling, and can dissever his connection without further expenditure at any moment he pleases.

Mr. Y. CHRISTAIN, who can appeal to his numerous clients for the benefit secured by those who followed his recommendation of North Levant, which mine will soon declare another dividend largely exceeding the first, and the shares of which have advanced 150 per cent. in value since his first notice of them, entreats his friends to lose no time in applying to him for Polbreen shares. As with North Levant so with Polbreen, he speaks after a personal inspection of the property, and entertains not a doubt of a good dividend being declared in the least possible space of time. Mr. CHRISTIAN can offer Polbreen shares at par (£3) at this moment, but as the demand will be great and immediate, it is improbable that he will be able to supply the shares at that low price for more than a very brief period.

11, *Royal Exchange, E.C.* BANKERS: BANK OF ENGLAND.

WATSON BROTHERS' MINING CIRCULAR

WATSON BROTHERS,

MINING AGENTS, STOCK AND SHARE DEALERS, &c.

1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for 25 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS, they are emboldened to offer, thus publicly, their best services to all connected with mines or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge or commission.

NEW EAST RUSSELL—"A Shareholder."—We are not surprised that our correspondent should be rather taken aback at the advertisement in last week's Journal; it was the first intimation we received that anyone had applied to wind-up the company, and, as the whole affair is an example of the working of the Stannaries Court, we publish it in the hope it may direct attention to this Court, and to ask how long such a state of things will be permitted to exist in Cornwall. The petitioners were creditors for 25*l.* 4*s.* for goods supplied before the management had been placed in the hands of Mr. Jehu Hitchins, in London. This gentleman, as secretary, wrote petitioners that the accounts had been transferred to his hands, and requested particulars of their claim, that they might be *investigated* and *settled*. This was in March last, and on May 12 they petition the Stannaries Court to wind-up the company for their claim, alleging three causes, as *false* as they were *damaging*—1. "That the said company had ceased to carry on its working operations for some time."—2. "All the machinery, materials, and effects had been sold."—3. "The company is unable to pay its debts." For neither of these allegations was there the *slightest foundation* in truth, and, on seeing the petition, a cheque was immediately forwarded for the 25*l.* 4*s.*, with a request that the petition containing such damaging accusations should be withdrawn. The reply from the solicitor was that it would not be withdrawn unless costs, amounting to 19*l.* 12*s.* 2*d.*, were sent by return of post. There was no alternative, therefore, but to pay 19*l.* 12*s.* 2*d.* costs on a debt of 25*l.* 4*s.*, or see the company wound-up. Need we make any further comment?

SATURDAY.—The chief demand to-day has been for Prince of Wales and South Herodsfoot shares; the former advanced to 30s., buyers. Prince of Wales, 30s. to 32s. 6d.; South Herodsfoot, 20s. to 22s. 6d.; Redmoor, 8s. to 10s.; Chontales, 30s. to 35s.; New Lovell, 1⅝ to 1¾; Crebor, 10s. to 12s. 6d.; Trelawny, 6 to 7; Buller, 14 to 16; Great Wheal Vor, 17½ to 18; North Treskerby, 12s. to 14s.; East Caradon, 6¾ to 7¼; Frank Mills, 4 to 4¼; Don Pedro, 5⅛ to 5⅜.

MONDAY.—Market closed.

TUESDAY.—Market steady, with a fair demand for Prince of Wales, South Herodsfoot, West Chiverton, and Chontales shares. West Chiverton, 49 to 51; Chontales, 30s. to 32s. 6d.; South Herodsfoot, 20s. to 22s. 6d.; Prince of Wales, 31s. to 33s.; West Frances, 52 to 54; Seton, 55 to 60; Great Laxey, 18¼ to 19¼; Frontino and Bolivia, 16s. to 18s.; Tincroft, 17½ to 18½; St. John del Rey (gold), 15½ to 16; Don Pedro, 5⅛ to 5⅜; Drake Walls, 17s. to 19s.; Providence Mines, 35 to 37; Chiverton, 2⅞ to 2⅞; Herodsfoot, 45 to 46; South Condurrow, 31s. to 33s.

WEDNESDAY.—The market is rather quiet to-day. Prince of Wales and Don Pedro flatter. West Chiverton firmer. Prince of Wales, 29s. to 31s.; Don Pedro, 5 to 5¼; West Chiverton, 49 to 51; Chiverton Moor, 3¼ to 3¾; Great Wheal Vor, 17 to 18; Chiverton, 2⅞ to 2⅞; Frontino, 16s. to 18s.; East Grenville, 4 to 4¼; Great Laxey, 18½ to 19½; Providence, 35 to 37; South Herodsfoot, 20s. to 22s. 6d.; Drake Walls, 18s. to 20s.; Chontales, 27s. 6d. to 30s.; East Caradon, 7 to 7¼; St. John del Rey, 15¼ to 16; West Frances, 52 to 54.

THURSDAY.—Market very quiet. East Grenville, South Herodsfoot, and West Chiverton chiefly in demand. Prince of Wales shares declined to 29 sellers. East Grenville, 4⅛ to 4⅜; South Herodsfoot, 20s. to 22s. 6d.; West Chiverton, 49 to 51; Prince of Wales, 28s. to 30s.; North Treskerby, 13s. to 15s.; Seton, 55 to 60; Buller, 14 to 15; Chiverton Moor, 3½ to 3¾; Chontales, 27s. 6d. to 30s.; Don Pedro, 4¾ to 5; St. John del Rey, 15½ to 16; Herodsfoot, 44 to 46; Great Wheal Vor, 17 to 17½; Frontino, 15s. to 17s. 6d.

FRIDAY.—The chief demand to-day is for East Grenville and South Herodsfoot, at an advance. East Grenville, 4⅜ to 4⅝; South Herodsfoot, 1½ to 1¼; Prince of Wales, 28s. to 30s.; West Frances, 50 to 52½; Buller, 14 to 16 (*call paid*, 20s.); Uny, 3½ to 3¾; Mineral Bottom, 3 to 3¼; Great Vor, 16½ to 17; Great Laxey, 18¼ to 19; Drake Walls, 18s. to 20s.; Frontino, 15s. to 17s. 6d.; Chiverton Moor, 3½ to 3¾; Chiverton, 2⅞ to 2⅞; Chontales, 27s. 6d. to 30s.; Don Pedro, 4¾ to 5; West Chiverton, 49 to 50; Providence Mines, 33 to 35.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—The lode in the open stopes has much improved, both driving south against the cross-course and in the bottoms. The new shaft, on the Van lode, is down about 5 fathoms, in a course of lead ore, from which 1 ton of lead can be broken down by a single hole in blasting. Vigorous operations are being prosecuted in the 15 fathom level, which will intersect the south lode, under the open cutting, in about a week. Other trial pits are being sunk further east on the Van lode, and if lead should be found, it will prove this property not only valuable and lasting, but second to no mine in the district. The air-pipes will be complete in about a fortnight, when the cross-cuts will be put through the Van lode at a depth of 96 fathoms, in various points, to test its value, and it is believed that large samplings of ore will take place. The water-wheel and crusher will be complete in about a month, and the parties interested will be content with the future sales of ore as a guarantee for the value of their property.

BEDFORD UNITED.—James Phillips, May 19: We are cutting into the lode in the 103 fm. level, and find the orey part to be 20 in. wide, yielding 4 tons of ore per fathom. The north wall not being reached, we are unable to state the size of the lode. The shaft has been productive from the 90 fathom level down, and has opened a valuable run of ore ground. The lode in the 90 west is 4 feet wide, producing 3½ tons of ore per fathom. No lode has been taken down in this level east. The rise in this level will produce from 4 to 5 tons of ore per fm. The lode in the 75 east is 4 feet wide, and will produce 6 tons of ore per fathom.

BLUE HILLS.—S. Bennetts, A. Gripe, May 15: The clearing of the levels at Poulyear's shaft from accumulated attle and mud is being rapidly proceeded with, and we hope speedily to get into some productive workings and commence raising tinstuff for the stamps. In the engine-shaft the men are progressing very favourably, and in the coming week will complete dividing, casing, and footway from surface down to water level, when the shaft will be ready for the pitwork, rods, &c. The masons are very busy in building the engine-house, which is going on rapidly, and we hope to complete it within the stipulated time; the foundation, also, for the boiler-house is being taken out, to be in readiness for the masons, and all other work is going on very favourably. The engine is being delivered on the mine.

BRONFLOYD.—T. Kemp, May 19: No. 3 Shaft—North Lode: The men have now accepted the 25*l.* as a bargain to sink this shaft 11 fathoms, and to do all preparatory work as offered and reported. The lode to the east and west of the cross-cut, in the 73, and to the west of No. 3 shaft, is looking exceedingly well, the average yield of each bargain being over 2½ tons of lead ore per cubic fathom; ground at present rather tight for progress. The lode to the west of cross-cut, in the 62, is worth 1½ ton of ore per cubic fathom. The stope under the 52 is looking well, and is worth quite 2 tons of ore per cubic fathom. Four men are engaged in putting in a stull in the back of the 52, to the west of the winze, for the purpose of keeping up the stuff thrown down from the 40 fathom level end. The lode in the 40 fm. level end west is becoming harder, and is intermixed with more spar. In No. 2 shaft, on south lode, a change of ground has taken place in the 52 fm. level end, west from said shaft, and the lode poor; according to instructions, this bargain is suspended. Two men are employed in timbering and securing the mouth of the adit level in the Church property, and our sawyers are busily engaged in cutting timber for the collaring of No. 1 shaft, &c.; this work will be pushed on as fast as possible. The mine is looking well, and the machinery is in first-rate working order.

CAPE CORNWALL.—R. Pryor, John Davey, May 18: The men in the 100 fm. level cross-cut, driving north of the engine-shaft, are making fair progress; the ground is strongly mineralised, and, in looking at the lode at surface, we must soon intersect the same at this point unless it changes its underlie. There is no change in the 70 fm. level cross-cut south, but judging from present appearance we must also be near the lode at this point.

CAPEL BANHAGLOG (or East Mid-Wales).—J. Kitto, May 20: The lode in engine-shaft, sinking below the adit level, is about 4 ft. wide, of a very promising character, producing occasonally good stones of lead ore, and will improve, I have no doubt, as we go down. In the deep adit level, driving west, the lode is about 5 feet wide, and looking more kindly to produce ore than I have seen it for a long time; in fact, I fully anticipated having an improvement of greater importance to report ere this. The masons have finished the wheel-case, and we shall commence about erecting the water-wheel for pumping, &c., forthwith, and hope to have it at work in about a month from this date. The prospects of the mine at the present depth are unusually good.

CARADON CONSOLS.—S. Bennetts, May 18: The ground in the shaft continues good, and without any water. In the 78 west the leading part of the lode is about 2 ft. wide, spotted with ore, as also are the capels for several feet to the north of it. In the east end it seems split, and somewhat smaller than it has been. The 78 north is letting out more water, and the cross-course quite soft, consequently it is just as troublesome for driving as when it was harder.

CEFN BRWYNO.—J. Paull, May 18: The 92 east is set to six men, at 147s. 6d. per fathom; the lode here is not so productive as of late, now yielding good saving work. The winze below the 80, east of engine-shaft, is set to six men, at 155s. per fathom; lode 3 ft. wide, worth 10 cwts. of lead ore per fathom. This winze will be communicated to the 92 in a few days. The 80 west is set to six men, at 160s. per fathom; the lode in present end is large, and yields 15 cwts. of lead ore per fathom. In the 56 east the lode is 4 ft. wide, worth 1 ton of lead ore per fathom, with every appearance of an improvement; this point is set to four men, at 145s. per fathom. The 20 west, on north lode, is set to four men, at 80s. per fathom; this lode continues to produce good stones of blende and spots of lead ore. The large pulley-frame over our drawing-shaft broke last week, and we have had to replace it by a new one, and also put up several new pulley-stands, &c. This work will be completed to-day, and we shall commence drawing again to-morrow.

CENTRAL MINERA.—W. Davies, May 20: The rise in back of the 50 yard level produces a little lead, but not enough to value. The winze in bottom of the 30 yard level is in very promising ground, with occasional stones of lead.

CHANTICLEER.—W. Wasley, May 20: We continue to make fair progress in sinking the shaft below the 110 yard level. The lode in the bottom of the shaft is about half a yard wide, of spar and clay, and producing some very fine lumps of ore, and is looking very likely for an improvement shortly.

CHIVERTON MOOR.—G. E. Tremayne, May 20: In the 40 cross-cut north, at Clogg's shaft, we have driven west on the first branch intersected 2 fms. I am very pleased to say for the last 3 ft. in driving it has very much improved in character and size; it is now 2½ ft. wide, composed of quartz, mundic, flookan, and a little lead, and letting out a large stream of water; from present appearances it is forming into a regular and well-defined lode. In the south lode we have no important change since our report last week. The 85 and 75 west continue to look very well. We shall be ready with our sampling on Tuesday.

CUDDRA.—F. Puckey, May 19: In the 142 end, driving west of Walker's shaft, the south or tin part of the lode has made a splice, and for the last 6 ft. driving the lode has been disordered, and poor for tin. In driving through the splice we now find that the tin part, west of the same, is making in the north part of the lode. Although yet small, we have broken some splendid stones of tin; the lode here is again looking exceedingly promising for further improvement. In cutting out the north part of the lode behind the end the lode is producing some good work for tin, but is exceedingly hard and spare for progress. In the 130 end, driving west, the lode is very large; we are carrying about 12 ft. of the same, and have no north wall. The lode here is of a very promising character, and producing a little tin throughout for that width, and presenting a very kindly appearance for an early improvement. The different stopes throughout the mine and tribute pitches, are without alteration.

CWM DARREN.—R. Williams, May 19: In the 20 end, driving east, there are spots of lead, and the lode is more defined as we get forward towards the ore gone down in the level above, but at present the lode is of no value. I have put the men who were in the adit in the old cross-cut; this seems to me to be an important point, and should be forced on, as the main lode cannot have been intersected in it, which is only a few fathoms ahead, and it is highly probable that its discovery here would be of great importance, the more so as it seems as if it has formed a junction with one of the Cwmsymlog lodes near where the adit would intersect it.

CWM ERFIN.—May 18: We continue to drive the 20 eastward into the hill; the lode in the same is 2 ft. wide, but unproductive for lead ore. The lode in the rise over the back of the deep adit level is 4½ ft. wide, composed of killas, quartz, blende, and lead ore, yielding about ¾ ton of the latter per fathom. We have 18 men employed in the various stopes over the back of the deep adit level, the whole of which continue to look very well. The lode varies from 1 to 3 yards wide, and will yield on an average 1¼ ton of lead ore per fm. A communication has been effected in driving Taylor's drift east of the boundary and west of the rise, which has nicely ventilated this section of the mine. We are driving this level forward with a full pare of men. The lode in the end is 1 ft. wide, composed principally of killas, decomposed quartz, and cubes of lead ore. The lode in the stope in bottom of Taylor's drift, west of Robert's winze, is 2½ ft. wide, worth 12 cwts. of lead ore per fm. The lode in the stope over the back of ditto has slightly improved, and will now yield about 1¼ ton of lead ore per fathom. The lode in William's level, going east of the boundary, is 2 ft. wide, composed of killas, veins of spar, and spots of mundic. The lode in the stope in bottom of ditto is ¼ yard wide, worth 12 cwts. of lead ore per fm. The lode in the stope over the back of ditto is 4 ft. wide, worth 15 cwts. of lead ore per fm. Nothing has been met with in driving the cross-cut north in this level, and it is for the present abandoned. We shall sample on Tuesday next 45 tons of silver-lead ore.

DOLWEN.—J. Davis, May 19: The men are progressing satisfactorily in the adit level, and the end is letting out a great deal of water, which, I believe, is coming from the north lode.

EAST GUNNISLAKE AND SOUTH BEDFORD.—J. Bray, May 20: Impham shaft is now cleared to a depth of 11½ fms. under the adit. The lode in the western end thereof is without change since I last wrote you. For the last 9 ft. cleared up we have had the lode in the eastern end of the shaft, and find it is 5 ft. wide—a very fine, kindly lode. We have commenced to fix a drawing-machine for the development of this part of the mine, on the south side of the engine wheel, and hope to have it completed by the end of the present month. No other change to advise you of.

EAST ROSEWARNE.—C. Glasson, May 20: In King's shaft, sinking below the 115, the lode is 12 in. wide, worth 5*l.* per fathom. In the 115, west of shaft, the lode is 12 in. wide, worth 6*l.* per fathom. In the 115, east of shaft, the lode is 18 in. wide, worth 4*l.* per fathom. In the 105, west of shaft, the lode is still 15 in. wide, producing stones of copper ore, and letting out more water than usual. In the 105, east of shaft, the lode is 12 in. wide, worth 4*l.* per fathom. In the 95, east of shaft, there is no lode taken down since my last report.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, May 15: The lode in the 45 east is worth fully 2 tons of copper ore per fathom, which ore is of a very good quality—in fact, the lode is looking better than we had expected to find it. In the 55 we find the lode to be gradually improving; from the appearance of the lode in the back of this level we have every confidence that there is a good lode above, and as we have always found the improved lode to take place first in the back of the level we have strong hopes of meeting with a good change shortly. You shall have a detailed report on Monday.

— G. R. Odgers, W. Bennetts, May 19: The lode in the winze sinking below the 75 east has improved to 2½ tons per fathom, which will make a produce of 8; we are hoping that this will still further improve. The men in the 45 are desuing the lode, and since the report for the meeting the men in the 55 have been engaged wheeling their stuff; the lode presents strong indications of another discovery. In the 25 we think we have just pricked the lode, but, it being on the cross-course, you shall have further particulars in a day or two. There is no other change.

EAST WHEAL REETH.—T. Uren, May 19: Since last report we have seen more of the lode that we had then discovered, which is proving very productive, and part of it rich for tin. Capt. J. Spargo has been to inspect the property for a gentleman in London, therefore, I will not write more, as you will be able to see his report.

GAWTON COPPER.—George Rowe, George Rowe, Jun., May 15: The lode in the 82, west from cross-cut, at King's engine-shaft, is 7 ft wide, yielding 5 tons of mundic, intermixed with ore, per fathom. The part of the lode carried in the 82 east is 8 feet wide, composed of capel, spar, and mundic, with good stones of ore. The lode in the 70 east is 5 feet wide, worth 3 tons of ore per fathom. The lode in the winze (Ferrell's) sinking below the 70, is worth 3 tons of ore per fathom. The lode in the stope, east of said winze, is worth 9 tons of ore per fathom. The lode in Nicholl's winze, sinking below the 60 east, is worth 5 tons of ore per fathom. All other points of operation are without change since last reported on.

GOGINAN.—May 20: The lode in the 110 fm. level, east of winze, below the 100, is 4 ft. wide, intermixed throughout with lead ore, and yields 12 cwts. of lead ore per fathom. The lode in the 100 fm. level, east of cross-cut south, is worth 15 cwts. of lead ore per fathom. In the 100 fm. level east, on south lode, we have put on four men, in order to make the ground available for stoping as quickly as possible; lode worth 1¼ ton of lead ore per fathom. We have three stopes working over the 100 fm. level, producing on an average 15 cwts. of lead ore per fathom. The stope over the drift, 15 fms. west of rise, is yielding 12 cwts. of lead ore per fathom. We have three pitches at work, producing on an average 10 cwts. of lead ore per fathom. We hope to sample about 33 tons of ore on Tuesday next, but our ore stuff has been of low quality lately.

GREAT LAXEY.—R. Rowe, May 19: The shaftmen are getting on well with their work, and will complete the new pump-rods to the bottom of the mine by the end of the present month. The 210 fm. level end is as last reported on. In the 200 the lode is still in contact with the large slide, and, therefore, in a disordered state, yet the end is worth from 60*l.* to 80*l.* per fathom for lead and blende. The 190 continues to open out new and good ground to the north of the slide just referred to, the lode in the end being worth from 60*l.* to 70*l.* per fm. The 180 fm. level end has fallen off in value, now worth 40*l.* per fathom. The 155 fm. level end is worth 80*l.* per fathom. The east lode, in the 145, is worth 20*l.* per fathom; the same level on the west lode, and considerably in advance towards Dumbell's shaft, has much improved, now worth 40*l.* per fm. Should this hold on, and continue for any length, it will be a very valuable discovery to us.—Dumbell's: The sinking of the engine-shaft below the 140 is much facilitated by the suspension of the pumps; the lode is also improving as we sink, and worth quite 50*l.* per fathom. The 140 fm. level end, driving north, continues to be worth about 60*l.* per fathom; and the 125 fm. level 80*l.* per fathom. The sump sinking from the 110, in advance of this end, is worth fully 100*l.* per fm. The 60, driving north, is worth 40*l.* per fathom; and a new sump, which we commenced to sink last month in the bottom of the 50, is worth 80*l.* per fathom. Altogether, Dumbell's ground especially, continues to open out and look exceedingly well. At Glenroy I am unable to report anything new since that of Capt. Barkell's of May 4. At surface we have a strong force of men building a new reservoir, or dam, as a provision against the scarcity of water for the wheel during the summer months, and which we believe will completely meet our requirements.

GREAT NORTH DOWNS.—Wm. Rich, Wm. Ennor, May 19: The ground in Sleggan's shaft appears to be easier than it has been; the whole of the water in this part of the mine to supply 19-in. pitwork is rising out of the very bottom of the shaft. We are sinking on the south wall of the lode, consequently we cannot see anything of its composition, but looking at the quantity of water

coming from it there must be a large porous lode standing to the north. The 84 fm. level end, east of Sleggan's, is worth 15*l.* per fathom. We hope to resume the driving of the 84, west of King's, very soon, as the water is now nearly drained to the back of the level. The 84, west of Sleggan's, yields saving work for copper; we have communicated the winze below the 74 with this level, which has given good ventilation, and opened ground for stoping. The stopes in the back of the 84 east are worth 10*l.* and 8*l.* per fathom. The stopes in the 74 west are worth 12*l.*, 8*l.*, and 7*l.* per fathom. The tin lode in the back of the 48, west of King's, is worth 8*l.* per fathom. Our tinstone sold last week for 203*l.* 7*s.* 6*d.* We have not been able to push on the 74, east of Butler's, owing to the air being bad; we are now fixing air-pipes, with the view to improve the ventilation. Butler's north lode, below the 54, has a very promising appearance, and worth 6*l.* per fathom for copper. The 64, west of cross-cut, on the south lode, is worth 5*l.* per fathom; the stope behind this end is worth 10*l.* per fathom. There is nothing new in the cross-cut, either at Vivian's, Butler's, or Sleggan's. The stopes in the 64, east of Butler's, are worth 12*l.*, 9*l.*, 7*l.*, and 6*l.* per fathom.

GREAT NORTH LAXEY.—R. Rowe, May 19: I am unable yet to pronounce a value on the 110 fm. level end, but the lode is 4 ft. wide, very promising, and yielding rich stones of lead and blende. The 96 fm. level end is not looking so well to-day, worth now 1 ton of lead per fathom. The 84, driving north, is still opening out a large and promising lode, 4 ft. wide, and worth 1 ton of lead per fathom. The lode in the 73 is again improving, 3 ft. wide, and worth 15 cwts. of lead per fm. The 27 sump south continues about the same, worth from 1 to 1½ ton of lead per fathom, and the stopes in the roof of the 60 are worth 1 ton of lead per fathom.

GREAT RETALLACK.—G. R. Odgers, J. Harris, May 20: No. 1 Lode: The lode at the engine-shaft, sinking below the 30, is 18 in. wide, worth 6 cwts. of lead per fathom. The lode in the 30 north is 1 ft. wide, worth from 3 to 4 cwts. of lead per fathom. The lode in the 30 south is 18 in. wide, with stones of lead. The lode in the stopes above the 20 north is worth 6 cwts. of lead per fathom. —No. 2 Lode: The men have finished changing the pitwork, which is again in fork, so that we have no change to report in the shaft. The lode in the 40 north is 2 ft. wide, composed of gossan and good lumps of lead—a most promising end. The lode in the rise above the 40 fm. level north is worth 5 cwts. of lead per fathom.

GREAT ROYALTON.—T. Parkyn, May 20: All things are progressing well. The stamps are kept constantly at work, and I can supply a much larger number from the great north lode, which is 4 ft. wide, and contains good work for tin.

GREAT SOUTH CHIVERTON.—J. Nancarrow, May 15: We have driven through another cross branch in the 20 east, which contains copper and mundic, and we have a little lead in the lode near it; the lode is looking better. No change in the end nor rise in the 40. The 50 fm. level end looks well, and yields 1 ton of lead per fathom. We are not yet up to anything valuable in the rise above the 50, but think we should have been if the men had not been hindered by the water being in at the beginning of the week.

GREAT SOUTH TOLGUS.—J. Daw, May 19: In the 154, west of No. 3 cross-cut, the lode is 3 feet wide, worth 9*l.* per fathom for tin. In the rise in the back of the 154 the lode is worth 18*l.* per fathom. In the winze sinking below the 154, on the tin lode, the lode is worth 8*l.* per fathom. The lode in the stopes in the back of the 154 still continues to be worth 25*l.* per fathom.—P.S. We shall sell between 7 and 8 tons of black tin on Saturday next.

GREAT WESTERN.—Edward Rogers, Edmund Rogers, May 19: Fisher's Lode: Thomas's engine-shaft is sunk 5 ft. below the 10; the ground is favourable for sinking. Pressure shaft is enlarged, and timbered 9 ft. below the 20, and producing tinstone that will just pay for stamping. In the cross-cut south towards Thomas's shaft good progress is being made. In the rise in the back of the 10, west of Jones's shaft, the lode is 1 ft. wide, unproductive.—Middle Lode: Curtis's flat-rod shaft is down 5 fms 3 ft. below the 20; the lode is without alteration since last reported on, worth 5*l.* per fathom. In the 20, driving east, the lode is improved, worth 5*l.* 10*s.* per fathom. In the winze sinking in the bottom of this level the lode is 3 ft. wide, worth 3*l.* per fathom. In the winze sinking in the bottom of the 7, west of the shaft, the lode is 3½ ft. wide, worth 3*l.* 10*s.* per fathom.—Caunter Lode: In the 20, driving east of Curtis's shaft, the lode is small and unproductive. In this level, driving west, the lode is 18 in. wide, worth 4*l.* per fathom. In the 17, from surface, the lode is worth 3*l.* per fathom. —South Lode: In the adit level, driving west, the lode is 1 ft. wide, producing some good stones of tin.—Stevens's Lode: In the 27, from surface, the lode is a little improved, worth 4*l.* per fathom, and passing through profitable ground. At surface the building of the engine-house is progressing very slow, by reason of the wet weather.

GREAT WHEAL BADDERN.—W. Giles, J. Jenkin, May 17; On Saturday last we set the cross-cut north of Hill Brothers shaft to drive by eight men, for the month, at 10*l.* per fathom, or cut the lode; the end is all in elvan, and has been for the last 4 ft. driving; the water is on the increase, and we expect it will increase from this time forth. The dam is all right, and answering the end for which it was intended. The engine is working well, and we believe we shall save 50 tons of coal for the month of May, which is of great importance. The water in the old mine is still going down, now about 20 ft. below the 12 fm. level.

GREAT WHEAL VOR UNITED.—Stephen Harris, John James, May 19: In the 216, east of Metal shaft, towards the winze, the ground is hard, and we calculate being near to the lode. The lode in the 204, east of Metal, is 18 in. wide, worth 20*l.* per fathom. The winze sinking below this level is down 9 fms., on a lode worth 25*l.* per fathom. The winze sinking below the 194, east of Metal, is down 6 fms., the lode being 1 ft. wide, worth 12*l.* per fathom. Ivey's shaft, sinking below the 204, is down about 3 fms., on a lode 1 ft. wide, with occasional stones of tin. The 204 is driven 9 fms. west of shaft; lode in present end is 2 ft. wide, worth 20*l.* per fathom. The 194 is extended 24 fms. west of shaft; the lode is hard and poor. The 162, west of shaft, is on a lode 2 ft. wide, which has greatly improved during the last few fathoms, now worth 15*l.* per fathom. The 157, west of rise, against Edwards's shaft, is on a lode 2 ft. wide, worth 25*l.* per fathom. We consider this point a very important feature for the future prospects of the mine, being in whole ground. The rise in back of this level, against Edwards's shaft, is up 2½ fms., on a lode 2 ft. wide, worth 20*l.* per fathom. The value of this rise has decreased during the last week, being disordered by a floor of spar; we trust, however, the lode will resume its former value on clearing its effects. The winze below the 157, west of Ivey's, is sunk about 4 fms.; the lode and branches are 4 ft. wide, worth 25*l.* per fathom. In consequence of the increase of water, we are obliged to suspend this winze until the 162 advances. A rise in back of the 157, over this winze, is in a lode 2 ft. wide, worth 30*l.* per fm. Edwards's shaft is sunk 4 fms. below the 125, and is progressing satisfactorily. The 125, west of Edwards's, is on a large lode, 4 ft. wide, but poor. Our tribute pitches are yielding their usual quantity of tin. We are making good progress in clearing out foundation for new engine-house at Edwards's shaft, and shall be prepared to commence building early in June, and are also preparing, as fast as possible, to send the whole of Metal water to Wheal Vor for dressing purposes. The machinery throughout the mine is in good working order.

GWYDYR PARK.—W. Smyth, May 18: The ground in Gwyn Llifion deep adit is without any particular change, but the end seems a little wetter. The Vuchelas deep adit is also without change.

HARWOOD.—W. Vipond, May 17: There is no material change in Mouncer cross-vein since my last. I think from appearances that we are near some other vein, and the men who are working this end are of the same opinion. The level is driving into new or whole ground, as yet unproved. Sear Head level the same. The workings at Trough are yielding ore to pay. We are busy preparing the ore for market, and the weather is favourable for us.

HINGSTON DOWN.—J. Richards, May 20: In the stope in the bottom of the 130, near Bailey's shaft, the lode is still worth 3 tons of ore or 12*l.* per fm. The lode in the stope in the back of the 130, east of Bailey's shaft, is 3 ft. wide, and worth 2 tons of ore or 6*l.* per fm. In the 100 west we continue to drive by side of the lode; the ground is moderately favourable. In the 85, east of Morris's shaft, the ground continues hard and progress slow. In the 55, east of Morris's shaft, and east of the eastern cross-cut, the ground admits of fair progress being made. In the stope in the bottom of the 55, east of Morris's shaft, the lode is worth 2 tons of ore or 6*l.* per fathom. In the deep adit level south the ground is tolerably favourable.

MAES-Y-SAFN.—May 14: We are still pushing on all the levels as fast as we can. The 350 and the 370, west of the sump-winze, are worth about 1 ton per fathom. The 330, east of Grosvenor's, is looking a little better in the bottom of the level; there is a very good stone of ore for 3 ft. high. We hope we are going over a good bunch of ore in this place; the lode for all the height of the level is worth 1½ ton per fathom. The sand in the 350, west of Grosvenor's, has been very troublesome for the last week or two; it is a little better now. We think we shall have about 110 tons of ore again for next sampling, but without some new discovery we cannot keep up this quantity much longer, but still think we shall cut into something good before long.

MID-WALES.—J. Kitto, May 20: The engine-shaft will be down for a new 24 fm. level by the end of next week, when we shall immediately commence to drive out both east and west on the lode. The lode in the 12 fm. level, driving west of engine-shaft, is fully 10 ft. wide, and presents unusually favourable prospects, about 3 ft. of the under part being well mixed with lead and blende, worth ¼ ton of the former, and 1½ ton of the latter per fathom. The prospects in the deep adit level have very considerably improved since my last report, being now from 3 to 4 ft. wide, and spotted with lead and blende throughout. I fully anticipate having a further improvement to report in my next. Altogether the prospects throughout the mine are very encouraging, and I have no doubt will continue to improve as depth is attained.

MINERA UNION.—W. T. Harris, May 20: Low's Shaft: The ground in the cross-cut in the 60 yard level is very promising, and I think the lode is not far from being cut into. The lode in this level north is 3 ft. wide, composed of carbonate of lime and a little lead.—Boundary Shaft: The ground in the 60 yard level north consists of limestone and chert. The pitch in the bottom of this level south is worth 8 cwts. of lead per fathom.—Brabner's Shaft: In the 80 yard level cross-cut we have intersected the lode, which is 3 ft. wide, composed of spar and chert; a good deal of water issues from the end, but no lead has yet been seen. I hope to be able to report more favourably when further opened on. The pitch in the bottom of this level south is worth 15 cwts. of lead per fathom. The pitch in the back is worth 12 cwts. of lead per fathom.—Flue Shaft: The lode in the winze sinking below the 40 yard level north is 2 feet wide, producing occasional stones of lead. The pitch in the bottom of the level north is worth 15 cwts. of lead per fathom.

MOUNT PLEASANT.—Wm. Wasley, May 20: Last Saturday being settling-day, I set the level to drive west of the boundary shaft, for this month, at 15*s.* per yard, the men to fill and land all the stuff, pay for drawing and all other costs. I have not set to the tributers yet at Bright shaft, nor to those at Jenkins's.

NEW CLIFFORD.—J. Michell, May 20: We have turned house on No. 1 lode in the 50, and are driving east and west on the same, the composition of which is mundic, peach, friable quartz, and some rich yellow copper ore—as fine and healthy a looking lode as can be seen, and one that is sure to turn out large quantities of mineral and give good profits to the shareholders in depth. The north cross-cut is much the same as when last reported on.

NEW CROW HILL.—A. Kent, T. Trelease, May 18: At the engine-shaft our operations are proceeding in the usual way, without any change to notice.—Wheal Louisa: At this mine we are making good progress in extending the 75 east; the lode in this end appears to be undergoing a change, and looking a little more kindly.

NEW GREAT CONSOLS.—R. Pryor, R. Trathen, T. Bennetts, May 17: During the past week we have made but little progress in driving the 86, in consequence of having work to do at the engine and whim-shafts. The stopes throughout the mine are much the same as when reported on last week. The men in Rendle's shaft, sinking below the surface, are making good progress, and every effort is made to make the communication. Our machinery is in good order, and working well.

NEW TRELEIGH.—Samuel Michell, May 19: The lode in both of the ends driving east and west of the new shaft, in the 78, are producing a fair quantity of ore; and the stopes in the back of the same level, five in number, will produce, in the aggregate, 10 tons of ore per fathom. The progress in the shaft sinking below the 78 has been rather slow for the last fortnight. We had to make some alteration in the shaft, which delayed the sinking a little. We have got about the ore for sampling, but the crusher, where we intend crushing the ore, is engaged for a few days, consequently we shall not be able to crush before next week, by which time we intend sampling.

NEW WHEAL LOVELL.—C. Bawden, J. Prisk, May 20: The lode in the 60, east of Hill's shaft, is 2 ft. wide, composed chiefly of strong capel. The lode in the 50, east of Lanyon's, is 2 ft. wide, containing a little tin—a promising lode. In the cross-cut north at this level the lode has not yet been reached. Lanyon's shaft is now down 7 fathoms below the 50; the lode in which is 4 ft. wide, containing tin, altogether an exceedingly fine lode; its appearance betokens the approach of another of those rich bunches for which this district is famous. The lode in the 40 east is about 2 ft. wide, producing stamps work. The lode in the winze below the 40 is 2½ ft. wide, worth 12*l.* per fathom. The lode in the stope, west of Lanyon's, at this level, is worth from 25*l.* to 30*l.* per fathom. The lode in the stope, east of Lanyon's, is worth 20*l.* per fathom. Another stope in the same level is worth 15*l.* per fathom. The lode in the 30, driving east, is large, but poor.—Colonel's Shaft: The lode in the 30, driving east, is 2 ft. wide, and worth 10*l.* per fathom. The winze below the 20 has been communicated to the 30, which has opened a section of ground that will enable us to raise more tin. The lode in the 20, driving west, is small, but producing saving work. We have discovered another lode at surface, about 30 fms. south of Colonel's; it is a very promising one, and containing tin even at the depth of only 2 fathoms from surface; we consider it a valuable adjunct to the mine.

NEW WHEAL PROSPER.—P. Floyd, May 21: We are getting on in a very satisfactory manner; the water is now down 3 ft. below the 20, and is still going down 1 ft. per day.

NEW WHEAL TOWAN.—R. Pryor, May 19: There has no particular change taken place in this mine worthy of notice since the report for the meeting. The men are still desuing the lode in the back of the adit level, which will be taken down in the course of a week or 10 days time.

NORTH RETALLACK.—G. R. Odgers, J. Harris, May 20: The lode in No. 1 boundary shaft, sinking below the 20, is from 15 to 18 in. wide, worth from 5 to 6 cwts. of lead per fathom, a most promising lode, which is perfectly dry.

NORTH TRESKERBY.—R. Pryor, T. Jenkins, May 20: Tresidder's Shaft: The lode in the 130, east of shaft, is 3½ ft. wide, worth 1 ton of ore per fathom. The lode in the 120 end east is 3 ft. wide, still worth 5*l.* per fathom, with a good appearance. The lode in the rise in back of the 110 east is 2 ft. wide, producing good stones of ore; and in the stopes in back of this level the lode is as good as when last reported on. The lode in the winze sinking below the 100 is 2 ft. wide, and only at present producing stones of ore; this winze will be communicated to the rise in back of the 110 in about a week from this time, when we shall lay open a good piece of profitable ground. The lode in the 47 end east has improved in its appearance and character, and the end is letting out water freely, which is a good indication. The sinking of Doctor's (new) shaft is progressing favourably. No change to notice in any other part of the mine.

OLD GUNNISLAKE.—F. Phillips, May 19: In Parker's shaft there is no change to notice in the lode since last report, but I think there are indications of a favourable change in the ground; 2 ft. has been sunk. In the deep adit cross-cut about 5 ft. has been driven; the ground continues much the same, and the indications quite as good.

PENHALLS.—S. Bennetts, W. Higgins, May 15: The sinking of the shaft below the 70 progresses much the same as for some time past. The lode in the 70 west is large, yet not very productive. The 70 east is worth 10*l.* per fathom. In the 60 west we have just met with a something not unlikely to be found a lode, bearing south-west, and letting out a quantity of water; by the end of next week we hope to be able to state particularly what this is. The 55 east, on the new lode, is worth 8*l.* per fathom. In the 55 west the lode is heaved by a gossan, and not yet cut to the north of it. The north lode in the 50 west is somewhat disordered in the present end by a small gossan, clear of which, however, it is worth 10*l.* per fathom. The winze below the 40 has been holed to the 50, and well ventilated the tribute pitches in this part of the mine. The 40, west from the Shop shaft, continues large, and producing a little tin. The winze below the 30, west of this shaft, is worth 8*l.* to 10*l.* per fathom. The 20 west has just passed a small cross-course, which heaved the lode about 1 ft., and slightly disordered it. In clearing the south shaft we found its bottom only 3½ fathoms below the 20, consequently there is no communication from this point to anything further south, nor is there any lode visible in it, beyond a small perpendicular one on which the shaft is sunk; we think it, therefore, advisable to at once commence driving south in the 30, on the eastern cross-course. All other points without much alteration.

PENHALE UNITED.—R. Pryor, H. Bennetts, J. Pryor, May 19: The lode in Phillips's engine-shaft, sinking below the 90, is improving in appearance and character. In the 90, driving south of shaft, the lode is 2½ ft. wide, and is worth 3 cwts. of lead per fathom. The lode in the 70, driving south of shaft, is producing good stones of lead, and promising for improvement. The lode in Hall's shaft, sinking below the 90, is 2 ft. wide, and improving, now worth 10 cwts. of lead per fathom. The lode in the 90, driving north of this shaft, is at present disordered by a cross branch; the ground here is very congenial, and from which we expect an early improvement. In the 80, driving north of shaft, the lode is 18 in. wide, producing good stones of lead, and letting out water freely, which is a good indication.

PENHALE WHEAL VOR.—W. H. Martin, May 19: In driving the 110 fm. level cross-cut, north from engine-shaft, the ground is a little better for progress. At Ritchie's shaft, in the 75 south cross-cut, the ground is intermixed with branches of mundic, and the water continues to issue from the breast of the end. All other points are without change.

PICKARDS DOWN.—Jos. Richards, May 19: Fair progress is being made in sinking the engine-shaft; the ground is easy, and very congenial to the production of lead ore. An assay of the lead ore produces 69½ per cent. for lead, and 26¾ ozs. of silver to the ton of ore.

PRINCESS OF WALES.—T. Foote, G. Rickard, May 19: The sinking of Harris's engine-shaft below the 20 fm. level is progressing very satisfactorily, and the class of ground is all that can be desired for the production of copper ore. In the 20 cross-cut north Vosper's lode is being cut through, and found to be fully 2 ft. wide, consisting of gossan, friable spar, and mundic, with spots of black and grey copper ore, and every appearance of becoming profitably productive at a deeper level.

REDMOOR.—T. Taylor, May 20: The lode in the 25 fm. level stopes is about 18 in. wide; the ground in the footwall is very soft, but no particular change in the worth of the lode. The gossan lode is about 3 ft. wide, of a very pretty character; but, as the tin is so hid, I cannot say what it is worth; we are breaking a pile, from which I shall take an average sample for tin and try it for silver. I hope to take the samples within a few days.

SNAEFELL.—Henry James, May 10: The lode at the engine-shaft is about 3 ft. wide, and getting in ground more compact and favourable for mineral, occasionally producing a little lead and blende, but not enough to value. In the 75 north the lode is 2 ft. wide, producing a little blende, mixed with lead, and looking favourable for a further improvement. No change in the 60 north to notice from last report; the ore-bearing ground is still a little beyond this end, according to the dip as seen in the level above. In the 50, north of the 40 sump, the lode is about 3 ft. wide, producing some good stuff for lead and blende, and likely, from appearance, to improve as we advance, the best ore ground in the 40 being a little beyond this level. In the 40 north the lode is from 1½ to 2 ft. wide, producing some good lead and blende, mixed with good steel ore—a kindly-looking end; this and the 50 is evidently getting into better ore-bearing ground as we advance north towards the east and west lode. The 20 fm. level stopes are still producing some good ore. All the machinery is in good order.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, May 15: We have cleared King's shaft to the 82, and shall resume driving the said level in the next week, where we have about three weeks work to intersect the tin lode. In the 71, west of King's shaft, we continue cutting through the lode, and have pleasure in saying that the samples which we have had assayed show that we are opening through a valuable lode, which is improving as we advance. We have already cut through the lode 27 feet, and believe that the most valuable part of it is still before us. In the 61, west of King's shaft, we continue to drive on the south part of the lode, carrying a width of about 5 feet, which from the assays made to-day is worth 50*l.* per fathom, whilst the appearances are strongly in favour of an improvement. In the winze sinking under the 61, west of King's shaft, we are carrying about 7 feet of the south part of the lode, which is worth by assay 50*l.* per fathom, making the winze, which is 2 ft. long, worth 100*l.* per fathom. In the 51, west of King's shaft, in driving west of the cross-cut north, No. 1 lode is 2½ feet wide, and worth from 12*l.* to 15*l.* per fathom; driving for 25*s.* per fathom. In driving west of the cross-cut, No. 2 lode is 6 in. wide, worth about 5*l.* per fathom; driving at 25*s.* per fathom. In driving east and west of the cross-cut, on the flat lode, we find the lode containing tin throughout a width of about 5 feet, and shall be able to report its value when we open a little further on it. The tin stopes and other part, are without alteration to notice.

SOUTH FOWEY CONSOLS.—F. Puckey, May 18: In driving the 30 fm. level cross-cut, south of the engine-shaft, we have driven through a small regular branch, but which is of no value; the end is still letting out water, and the ground therein favourable for progress. In the 30 fm. level end, driving east of engine-shaft, the lode is 2 ft. wide, composed of soft quartz and peach, intermixed with killas; at this point we are near the intersection of the two lodes, which in a short distance further driving will unite. After passing the influence of the intersection no doubt the lode will become productive for copper. The stratum of ground is very good and easy for exploring.

SOUTH HERODSFOOD.—Wm. Goldsworthy, May 20: The men are making fair progress in driving the cross-cut at the 100 fm. level. The ground is still of a very promising character, being a pretty blue killas, strongly impregnated with mundic, and letting out a little water.

SOUTH MERLLYN.—H. R. Harvey, May 20: The lode in the 40 north is improving in character, and the ground becoming more favourable for progress; we are getting good lumps of ore from the end, and according to present appearances the ore is increasing in quantity as the level is extended. The stopes in the back of the 40 south are looking well. No other change.

SOUTH TRELAWNY.—P. Harvey, May 18: The lode continues its full size, with a smaller portion of gossan, producing some nice bits of mundic and carbonate of lime, which are very congenial for silver-lead ore. I believe we are bordering on another lode, as there appears to be a change taking place in the lode. The ground is very favourable for driving, and we are going on with all possible speed.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, May 15: The lode in the 42, east from the cross-cut, is 2 ft. wide, composed of friable quartz and stones of copper; this lode is looking a little better than it did last week, and the ground is getting easier. There is no change in the 42 west.

ST. JUST AMALGAMATED.—R. Pryor, Thos. Gundry, N. Bartle, May 18: Saveall's Lode: The lode in the 110, driving east of engine-shaft, has not been taken down since our last report; consequently, there is no change worthy of remark. The lode in the 110, driving east of shaft, is worth 3*l.* per fathom; in this level, west of shaft, we have no change to notice, the men having been desuing the lode during the past week. The lode in the 90, driving west of shaft, is worth 3*l.* per fathom. The lode in the 76, driving west, is 2 ft. wide, producing a little tin, but not enough to value. Our object in driving the end is to intersect the junction of killas and granite, at which point we expect good deposits of tin. The lode in the winze sinking below the 76 is worth 8*l.* per fm.; this winze is being pushed on to ventilate the 90, which, when accomplished, will lay open a valuable piece of tribute ground. The lode in the 76, driving west of cross-cut, on the south branch, is worth 4*l.* per fathom.—Pryor's Lode: The lode in the 62, driving west of cross-cut, is at present disordered by a branch, and not to value. The lode in the winze sinking below this level, west of cross-cut, is worth 8*l.* per fm. The lode in the 40, driving east of north shaft, on the north lode, is producing good stodes of tin—a kindly lode.—Owl Lode: The lode in the 40, driving north from Reddipper shaft, is worth 5*l.* per fathom, and improving. The lode in the 20, driving east of West Buck shaft, is worth 6*l.* per fathom. The lode in the rise in back of the 10, north of West Buck shaft, is worth 8*l.* per fathom. The lode in the winze sinking below the adit, west of West Buck shaft, is worth 6*l.* per fathom. The lode in the 10, driving west of West Buck shaft, on the north branch, is worth 2*l.* per fathom. There is no change to notice in any other bargain since last report.

TAMAR VALLEY SILVER-LEAD.—J. Goldsworthy, May 20: Weston's Engine-Shaft: In the cross-cut driving east at the 57, towards the Tamar Valley lode, the stratum is composed of a light blue clay-slate, intermixed with spar, quartz, &c. Every effort is being made to reach the lode in as short time as possible. There is nothing new in the tribute department. Fair progress is being made in all other operations.

TREREW.—May 14: There is not much alteration to notice since our last report, except meeting with a hard, troublesome bar of ground in the 20 fathom level end south. We directed the men to drive on by the side of the lode last setting-day as it was letting out so much water that it was spare for driving in, and as we wish to hasten on this end to get back south under more kindly ground. The lode in the 32 is composed of soft spar, with a little mundic—soft ground for driving. We have cut a plat in the adit level, at the footway shaft, and have commenced to sink; it is now down about 2 fms., and quite dry. This shaft will have to be sunk some fathoms perpendicular before we cut the lode; when this is done we shall sink on the course of it.

VIGRA AND CLOGAU.—W. J. Cooke, May 20: St. David's Lode, No. 2 Mine: There is no alteration in the working of the mine since my report of the 13th. The lode in the shaft continues to look well, but is somewhat pinched; in the east side it is 3 ft. wide, and west 4½ ft. The stope has made but little progress, some of the hands being absent. At Vigra the wheel is undergoing repairs.

WEST BASSET.—G. Lightly, May 19: At Grenville's shaft, in the 164 east, the lode is worth 1 ton of ore per fathom. In the rise in the back of the 164 west the lode is worth 1½ ton of ore per fathom. In the rise in the back of the 154 east the lode is also worth 1½ ton of ore per fathom. In the 114 west, on the caunter lode, the lode is about 1 foot wide, yielding some very fine work for tin. In the winzes under the 75, 65, and 52, on the middle lode, the lode continues to yield tinstuff of fair quality.

WEST CARADON.—Wm. Johns, N. Richards, May 20: At Elliott's engine-shaft in the 170 east, on Allen's lode, no particular change has taken place since last reported no; nor in the 170 fm. level cross-cut, north from the lode. At Marina's shaft, in the 30 east, on Allen's lode, the lode is 2 ft. wide, worth from 2 to 2½ tons per fathom. In the winze sinking below this level the lode made a splice, but is resuming its former size, producing fine specimens of copper —a very kindly lode. In Marina's shaft we are again free from the elvan, with a leader coming in with the granite; this not only augurs well for the future, but the sinking of the shaft will be more rapid. Seeing that the lode is still holding out good, and likely to continue, there is no doubt that we shall open out an entirely new mine in this part of the sett.

WEST CWM ERFIN.—May 19: The south part of the lode in the adit level, going east of engine-shaft, contains nice spots of lead ore, and is letting out a great quantity of water. We hope this will lead to something good. No change to remark upon in the cross-cut north in the adit level, east of engine shaft, but the ground still rather hard.

WEST MARIA AND FORTESCUE CONSOLS.—Wm. Skewis, J. Donnal, May 19: West Maria Lode: The lode in the 60 east is still large, 6 ft. wide, and of the same value as last reported, worth 35*l.* per fathom, a very fine-looking lode. The stope in the back of the 60 is worth 12*l.* per fathom.—Willesford's Shaft: The top plat will be completed in a day or two, so as to commence sinking below the 60, which will be continued on the course of the lode to the required depth for a 72 fm. level with all speed. There has not been any lode taken down in the 50 east since the driving has been resumed. The ground in the 50 fm. level cross-cut south is favourable for progress and the production of mineral. The lode in the 50 fm. level stope, in the back of the 50, is worth 15*l.* per fathom. No lode taken down in the 40 east since last report; the ground by the side is improved. Capel Tor lode not taken down.—Surface: The ground is taken out for angle-bob and rods to Willesford's shaft, and no time will be lost in fixing this work.

WEST WHEAL TOLGUS.—May 19: In our last report, on the 12th inst., it was stated that the water was drained to the back of the 75; on Friday morning the 75 was dry, and the sumpmen changed the clack in that level, and we measured the bargains and connected the lift, and commenced forking the water below the 75. We examined the two defective rods in the 40, and considered they were looking as well as for some time past, but we made up our minds to remove them as soon as the water was in fork to the 85, which we thought would be by Tuesday morning; this we considered would give us good water-way for doing the work, without its rising over the 65 fm. level plunger-clacks. At ten o'clock on Friday night one of those defective pieces of rod parted, and we had no alternative but at once to change them; we heaved out those two pieces, when we perceived that the piece of rod above and adjoining was also defective. We have, therefore, changed the three pieces of main rods. At the time the rod parted the water was drained 3 fathoms below the 75, and when we finished the work, and put the engine to work, on Monday morning at 5 o'clock, the water had risen to the back of the 65. The water is now 3 fathoms below the 65, and forking well. There is nothing in the pitwork that is defective now; as far as we can see, all seems to be working well. No lode taken down in Richard's shaft since last reported; the men are making fair progress in sinking the shaft.

WEST WHEAL TREMAYNE.—S. Roberts, May 18: In the 44 east, although the ground is hard, the lode is 14 in. wide, yielding both tin and copper ore. We have began a cross-cut south on the cross lode in the 44, which is driven 2 fms.; ground easy for driving. In the 20 west, on south lode, the lode is again improving; the split in the lode spoken of last week has somewhat disordered it, but now it is more defined and settled, yielding good tinstuff.

WHEAL AGAR.—E. Rogers, May 19: The lode in the engine-shaft, sinking under the 130, is 3 ft. wide, producing saving work for tin, with a kindly appearance. The same remark will apply to the lode in the 130 end, east of shaft, just commenced to drive. The lode in the 130, west of shaft, is still worth 10*l.* per fathom. There is nothing new to report on in the flat-rod shaft, sinking under the 170, or in the 170 cross-cut.

WHEAL BASSET AND GRYLLS.—W. Oats, jun., P. Prisk, May 18: Setting Report: Friday last being our setting-day, we set the following bargains:—Tyacke's: The 44 fm. level to drive west on south branch, by six men, 2 fms. or the month, at 6*l.* per fathom, which is 18 in. wide, producing saving work for tin.—Wheal Foster: The 85 fm. level to drive west of Drigger's shaft, on the north lode, 1 fathom, or get under the winze, by six men, at 7*l.* per fathom; lode 3 ft. wide, producing a little tin. A rise in the back of the 75 fm. level, on the slide, 3 fathoms, or communicate with the winze being sunk below the 65 fm. level, on the south lode, by four men, at 2*l.* 10*s.* per fathom. Said winze to sink below the 65 fm. level 1 fathom, to communicate with the rise, by six men and three boys, at 18*l.* per fathom. The 65 fm. level to drive east on south lode, by two men, for the month, at 5*l.* per fathom; lode 18 in. wide, worth 5*l.* per fathom. In the 55 fm. level east we have just passed through a small cross-course, which heaved the lode south; set to four men, to drive in that direction 1 fathom, at 5*l.* The 55 fm. level to drive west, by two men, at 3*l.* per fathom; lode 15 in. wide, worth 8*l.* per fathom. The rise in the back of the 45 fm. level, against eastern shaft, to complete to the 35 fm. level, by two men and two boys, for 21*l.*, per contract; lode 9 in. wide, producing saving work for tin. The rise in the back of the 35 fm. level, against said shaft, by two men, at 4*l.* 10*s.* per fathom.—Wheal Fat: The 42 fm. level to drive east of Middlework shaft, by six men, for the month, at 10*l.* per fathom; lode 2 ft. wide, worth 10*l.* per fathom. The bottom of the 30 fm. level to stope east of Middlework shaft, by six men, at 8*l.* per fathom; lode worth 10*l.* per fathom. The 22 fm. level to drive east on the north branches, by six men, the month, at 6*l.* 10*s.* per fathom, now worth 10*l.* per fathom; here there is a little falling off in value, but we believe it to be only temporary, being subject to changes. The winze in the bottom of the said level to sink by four men, at 8*l.* per fathom; worth 15*l.* per fathom. A rise in the back of the said level, against the new shaft, set to four men, at 6*l.* 10*s.* per fathom; worth 15*l.* per fathom. The cross-cut to drive north of said level, by two men, at 5*l.* per fathom. The new shaft from surface to sink by twelve men, for the month, at 6*l.* per fathom. And thirty pitches to sixty-five men and eight boys, at an average tribute of 12*s.* in 1*l.*, at 55*l.* per ton for tin.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, May 15: The lode in the 130, west from the new shaft, is 2½ ft. wide, composed of a mass of gossan, that contains a little tin. The lode in the 120 west is 3½ ft. wide, worth from 10*l.* to 12*l.* per fathom, which has a very promising appearance, and which is laying open good paying ground. The lode in the 100 east is worth for tin 10*l.* per fm. The lode in the 90 east is worth 8*l.* per fathom. The ground in the 90 cross-cut north is getting more wet, and which we are forcing on with all dispatch. The branches met with have no connection whatever with the lode, and we have very great confidence of finding the lode in this cross-cut. The lode in the 80 west is 2 ft. wide, worth 6*l.* per fathom. The lode in the 66 west is 2½ ft. wide, producing tinny work. The tributers, on the whole, are working with vigour, and we hope they are getting fair wages.

— G. R. Odgers, W. Bennetts, May 20: We find by the samples tried this week that the tin from the 130 west is getting stronger, therefore we hope, judging from the character of the lode, that it may quickly improve. The ground in the 90 fm. level cross-cut north is a little wetter; the men are hurrying this on with all speed. We have no other change to notice since our last advice.

WHEAL KITTY (St. Agnes).—Stephen Davey, William Polkinhorne, May 15: Nothing worthy of remark has taken place in either of the bargains throughout the mine since our report for the quarterly meeting, except the holing of the winze in bottom of the 82 west to the 94, which has given good ventilation to both ends.

WHEAL MARY ANN.—P. Clymo, J. Harris, J. Stevens, J. Skeat, May 20: The cross-cut in the 240 is extended 10½ fathoms towards the lode. In the 230 north the lode is still small, but producing a little ore; in the same level south the lode is 2½ ft. wide, worth 10*l.* per fathom. There is no change to notice in the 220 north; in the same level south the lode is 2 ft. wide, worth 8*l.* per fm. The lode in the 210 north is still unproductive; the lode in the same level south is still small and poor. In the 200 north the lode is 2½ ft. wide, worth 6*l.* per fathom. In the 190 north the lode is 1½ ft. wide, producing stones of ore. The stopes and pitches are producing much as usual. We have this day sold to Messrs. Stock and Co. our No. 1 parcel of silver-lead ores, computed 47 tons, at 23*l.* 16*s.* 6*d.* per ton, and to Messrs. Sims, Williams, Neville, and Co. our No. 2 parcel, computed 48 tons, at 14*l.* 18*s.* 6*d.* per ton.

WHEAL UNY.—S. Coade, M. Rogers, May 15: We beg to inform you the shaftmen have been engaged this week in clearing the shaft for sinking, and will commence to sink on Tuesday next. We are glad to say the machinery is now in good working order, and shall now be raising the usual quantity of tin. The 140 east is worth for 6 feet wide 20*l.* per fathom. The 130 east is worth for 6 feet wide 12*l.* per fathom. The 120 east is worth for 6 ft. wide 12*l.* per fathom. The 110 east is worth for 6 ft. wide 10*l.* per fathom. The 100 east is worth for 6 feet wide 9*l.* per fathom. The 120, west of incline, is worth for 6 ft. wide 8*l.* per fathom. We have sold this day to the Redruth Company 8 tons 6 cwts. 3 qrs. 21 lbs. of black tin, at 72*l.* 15*s.* per ton=606*l.* 12*s.* 4*d.*

SCIENCE AND ART.—A striking instance of the immense value a small piece of steel may acquire by the great power of skilled mechanical labour is the balance-spring of a watch. From its extreme fineness and delicacy 4000 weigh not more than one ounce, and exceed in value 1000*l.* A most interesting little work, describing the rise and progress of watchmaking, has been published by Mr. J. W. Benson, 25, Old Bond Street, and the City Steam Factory, 58 and 60, Ludgate Hill. The book, which is profusely illustrated, gives a full description of the various kinds of watches and clocks, with their prices. Mr. Benson (who holds the appointment to the Prince of Wales) has also published a pamphlet on Artistic Gold Jewellery, illustrated with the most beautiful designs of

Bracelets, Brooches, Earrings, Lockets, &c., suitable for Wedding, Birthday, and other presents. These pamphlets are sent post free for two stamps each, and they cannot be too strongly recommended to those contemplating a purchase, especially to residents in the country or abroad, who are thus enabled to select any article they may require, and have it forwarded with perfect safety.

GOLD MINING IN BRAZIL—THE DON PEDRO.—The produce for March amounts to 28,220 oitavas, as against 22,726 oitavas the previous month, and 11,502 oitavas for March, 1868. The produce cleared up to April 17 was 8043 oitavas, against 12,467 oitavas for the first division of March.

THE VAN MINE.—The lode in the 30 fathom level cross-cut, under adit, has been cut through 4¼ fms., and is valued by the manager at 4 tons per cubic fathom (or 18 tons for the width of the lode as far as cut into). There is yet a portion of the lode to be cut through, and the valuation is independent of that portion passed through before entering the main or rich part of the lode. The shaft is down 11 fms. below the 15 fm. level, and is still rich for lead. The stopes in other parts of the mine continue equally productive. The stone-breaker is at work, and the extension of the ore dressing-floors is being rapidly proceeded with. The general opinion of those who visited the mine on Wednesday (the first inspection day) was that the manager's estimates were less than the actual value of the different points of operation.

NEW BRYNPOSTIG.—Vigorous operations have been commenced, and the improving indications strengthen the opinion expressed by the manager and others that a comparatively limited development will prove this property to be at least equal to its successful neighbours.

POLBREEN.—A week or two since it was announced that the public would soon have an opportunity of taking part in revivifying a mine from which one man alone took out 30,000*l.* in a very short time, and which is actually hemmed in all round by some of the most prosperous mines in the county of Cornwall. In another column will be found the prospectus of the Polbreen Mine, the property referred to. The capriciousness with which first-rate mining setts are occasionally abandoned by the holders was never so remarkably exemplified as in the instance of Polbreen. The name of the mine is a very bye-word in Cornwall for immense mineral wealth. Vicinity to the old and famous Polbreen has been put forward lately as the greatest possible recommendation that could be advanced in favour of some new mines introduced to public notice within the last month. The "productive lodes of Polbreen," "the celebrated Polbreen Mine," are brought into play as the best possible guarantees for the great returns to be made by its neighbours. But Polbreen itself has more tin within it than has ever yet been taken out, though it has been worked at intervals from a very early period. Not a man, it is said, ever worked it yet that had cause to regret his outlay of time or money. In truth, the mine has yielded so much and so bountifully that every successive holder has gone away with his pockets full enough to render him careless about probing further the moment the slightest check was experienced, or the price of the ore fell off. Thus three out of the five lodes embraced in the sett have scarcely been touched, and the other two have been worked only to what, with the powers of the present day, is considered a very shallow depth. St. Agnes Beacon is the centre of a marvellous plot of mineral-producing ground. To say that a mine is close to the Beacon is for miners quite enough, for "near that hill tin mines have been worked for centuries, and the yield and profits have been enormous." Polbreen is on the eastern declivity of St. Agnes Beacon, and the five lodes run east and west parallel with mines, such as Trevaunance and others, that for generations past and up to this day have constantly proved treasures of ore. Engines, engine-house, carpenter's, and other shops—all the plant for a tin mine—is standing at Polbreen, needing but a few repairs and trifling additions, so that all will be at full stretch in a space of time to be reckoned by days. The mine is to be worked on the Cost-book System, so that the limited liability of the shareholders is no mere phrase. Thus liability remains in their own hands, and as no call is contemplated, or even probable, the liability is really limited to the price at which the shares can be purchased. Capt. Nancarrow states in his report, written a few days ago, after a minute personal inspection of the mine, that "the position of the lodes in Polbreen, the strata in which they are embedded, their numerous intersections, and proved character, all tend to ensure their productiveness."

The NEW ZEALAND QUARTZ CRUSHING AND GOLD MINING COMPANY (Limited) closes its share list on Wednesday; and the fact that its machinery is in course of manufacture proves that the investing public have faith in the undertaking, thus confirming original anticipations, the impression from the first being (as shown in our previous issues) that its great freedom from risk and speculation, utilising the whole of its capital, making its chief officers' remuneration depend entirely on its success, and a variety of other points embraced in the plan of operations, could not fail to recommend it as a genuine investment. Some doubt has been expressed as to how far the disaffected Maories are likely to interfere with the magnificent gold region in the Northern Island; but when it is considered that the natives actually in rebellion only number 900, and in a district far remote from the gold field, where there are 15,000 mines, more need not be said on the subject, beyond assuring those who have read our former remarks on the company that we shall watch its progress with interest, and keep them well informed.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WEST GREAT WORK.—Notwithstanding the low price of tin for a long period, yet this mine has paid its way for the past three years, without making a single call on the shareholders. It is now opening out well, and the first dividend is expected some time in June.

OLD RUSSELL.—You will be glad to hear that the difficulties between the Duke of Bedford and the adventurers in this mine have been amicably arranged, and that operations will be at once commenced in sinking the shaft, which, from present indications, will return an abundance of ore. At no very distant period I hope the returns of ore will make up for the falling off of the supplies from Devon Great Consols.—OBSERVER.

DEVON AND CORNWALL UNITED MINES are opening out well. The lode in the back of the 34 west is worth 3 tons per fathom; this is in whole ground to surface. The 46 is coming up under this level; the lode has a splendid appearance; a good course of ore is daily expected from the large quantities returned in the upper levels. The tribute pitches are looking well. The Duke's agent, who lately inspected the underground workings, is of opinion that very important discoveries will be made ere long.

WEST MARIA AND FORTESCUE.—The sale of copper this week is 221 tons, besides poor ore sold privately at a two-months sale. The 60 fathom level, driving east, is worth 35*l.* per fathom. The new engine-shaft, sinking under the 60, is in a good course of copper. The 60, driving east on Capel Tor lode, is coming up under the ore in the 50. The returns will in a short time be largely increased, and the mine making a good profit.

ROSEWALL HILL AND RANSOM UNITED is making good discoveries, particularly in Ransom (adjoining St. Just Consols). At the approaching meeting a considerable profit is expected to be shown.

GWYNFYNYDD GOLD MINES (near Dolgelly).—The beautiful weather, and the attraction of the two water-falls, Pistyll-y-cae and Rhaiadr Mawddach, have induced a great number of visitors to inspect the experiments in the extraction of gold from the sulphides, &c., to which reference has previously been made. The water-falls have respectively elevations of 80 and 120 ft., giving an enormous power for quartz crushing. The works are erected on the peninsula between the two mountain torrents, which unite at its apex. Some of the arsenical ores recently assayed in London give as much as 4½ ozs. of gold to the ton, which tallies precisely with the amount extracted by the new Australian process. In the old workings these arsenical sulphides were generally rejected as being utterly worthless.

SNAEFELL.—A considerable improvement has taken place within the last few days. A solid rib of lead, 6 in. wide, has been cut in the end of the 40, going north. The 50 is producing good ore, and the 60 is progressing well. There seems no doubt of success. Shares have risen from 10s. 6d. to 15s., at which rate 200 of the unallotted shares were sold, but the directors refuse that price for any more.

CLIFFORD MINE.—At the recent meeting a special vote of thanks was passed to the manager, Capt. John Gilbert, and to the engineer, Mr. John Hocking, jun., for the great skill and activity they displayed in forking these extensive mines of water so rapidly. The agency cost here is 130*l.* a month; engineers, 170*l.*; tutwork, 780*l.*; tribute in January, 650*l.*; February, *nil*; pitwork, &c., 100*l.*; bank charges, 90*l.*, at the rate of 1080*l.* a year; dressing cost, 133*l.* Norway timber is charged 7d., Quebec 1s. 3d., Baltic 1s. per foot; new pumps, 7s. 6d.; tallow, 54s. and 51s.; candles, 5s. 6d. and 5s. 8d.; powder, 33s. Coals, 2366 tons, are charged 15s. 6d. and ,16s., and coals imported 636*l.*

GEOLOGICAL SOCIETY OF LONDON.—May 12: Prof. T. H. Huxley, LL.D., F.R.S., President, in the chair. Francis Henry Brown, of Bishwell, near Swansea; Samuel Jenkins, Clement's Inn-passage; Lieut. Walter Hawels James, R.E., Brompton Barracks, Chatham; C. Lambert, Queen-street-place; Gordon Broome, Royal School of Mines, and Thomas William Gardner, Assoc. Inst. C.E., St. Augustine's-square, Camden-road, were elected Fellows of the Society. The following communications were read:—

1.—"On some of the results arising from the bedding, joints, and spheroidal structure of the Granite on the Eastern side of Dartmoor, Devonshire," by G. Wareing Ormerod, M.A., F.G.S.

2.—"Notes on apparent Lithodomous perforations on the Hills of North-west Lancashire," by D. Mackintosh, F.G.S.

3.—"On the Parallel Roads of Glen Roy," by Prof. J. Nicol, F.R.S., F.G.S.

4.—"On beds of supposed 'Rothliegende' age, near Knaresborough," by J. Clifton Ward, F.G.S.

On Wednesday, the following communications will be read:—1. "On the Geology of Cape York," by A. Rattray: communicated by the President.—2. "On the Formation of the Chesil Bank," by H. W. Bristow, F.R.S., and W. Whitaker, B.A., F.G.S.—3. "On a raised Beach at Portland Bill," by Wm. Whitaker, B.A., F.G.S.—4. "On a large Saurian humerus from the immeridge Clay," by J. W. Hulke, F.R.S., F.G.S.—5. "On a new form of Labyrinthodont," by T. H. Huxley, LL.D., F.R.S., with notes on its locality and stratigraphical position, by Louis C. Miall.—6. "On the Upper Jaw of *Megalosaurus*," by T. H. Huxley, LL.D., F.R.S.

THE INSTITUTION OF CIVIL ENGINEERS.—During the Session just concluded there have been added to the Register of this Institution one Honorary Member (H.I.M. Napoleon III., Emperor of the French), 30 Members, and 82 Associates, while the Council have admitted 31 Students. The numbers of the several classes now on the books are 17 Honorary Members, 664 Members, 934 Associates, and 143 Students, or a total of 1758 of all classes.—On Tuesday evening next Mr. Charles Hutton Gregory, the President of this Institution, will receive the Members at his annual conversazione, to which he has invited all the leading celebrities of the day, many of whom may be expected to be present.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, MAY 21, 1869.

COPPER.	£ s. d.	£ s. d.
Best selected..p. ton	76 0 0-	—
Tough cake and tile	74 0 0-	—
Sheathing & sheets.	78 0 0-	—
Bolts	78 0 0-	—
Bottoms	80 0 0-	—
Old (Exchange)	63 0 0-	—
Burra Burra	76 0 0-	—
Wire.....per lb.	0 1 0	- 0 1 0½
Tubes	0 0 11½	- 1 0

BRASS.	Per lb.
Sheets .....per lb.	9d.- —
Wire ..... „	8½d.-8¼d.
Tubes ..... „	10½d.-11½d.
Yellow Metal Sheath.p. lb.	7d.- —
Sheets ..... „	6¼d.-6¾d.

SPELTER.	Per ton.
Foreign on the spot	£20 0 0- 20 5 0
„ to arrive..	20 5 0- —

ZINC.	
In sheets	£26 0 0- —

TIN.	
English blocks	127 0 0
Do., bars (in barrels)	128 0 0
Do., refined	133 0 0
Banca	134 0 0
Straits	132 0 0

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 8 0- 1 10 0
IX Ditto, 1st quality	1 14 0- 1 16 0
IC Ditto, 2d quality..	1 7 0- 1 8 0
IX Ditto, 2d quality..	1 13 0- 1 14 0
IC Coke	1 4 0- 1 6 0
IX Ditto	1 10 0- 1 12 0
Canada plates, p. ton	13 10 0- —
Ditto, at works	12 10 0- —

* At the works, 1s. to 1s. 6d. per box less.

IRON.	Per ton.
Bars Welsh, in London	6 15 0- —
Ditto, to arrive	6 15 0- —
Nail rods	7 2 6- 7 5 0
„ Staffd. in London	7 12 6- 8 10 0
Bars ditto	7 10 0- 9 10 0
Hoops ditto	8 0 0- 9 15 0
Sheets, single	9 0 0-11 0 0
Pig No. 1, in Wales	3 15 0- 4 5 0
Refined metal, ditto	4 0 0- 5 0 0
Bars, common ditto	6 0 0- 6 5 0
Do. mrch. Tyne or Tees	6 10 0- —
Do., railway, in Wales	6 15 0- 7 10 0
Do., Swed. in London.	10 0 0-10 5 0
To arrive	10 5 0- —
Pig, No. 1, in Clyde	2 11 6- 2 19 6
Do. f.o.b. Tyne or Tees	2 9 6- —
Do. Nos. 3, 4, f.o.b. do.	2 6 6- 2 7 0
Railway chairs	5 10 0- 5 15 0
„ spikes	11 0 0-12 0 0
Indian Charcoal Pigs, in London, p. ton	6 0 0- 6 10 0

STEEL.	Per ton.
Swed., in kegs (rolled)	— - —
„ (hammered)	14 15 0-15 5 0
Ditto, in faggots	15 15 0-16 0 0
English, spring	19 0 0-23 0 0
QUICKSILVER (p. bottle)	6 17 0- —

LEAD.	Per ton.
English Pig, com.	19 5 0- —
Ditto, LB.	19 12 6-19 15 0
Ditto, WB	20 15 0- —
Ditto, sheet	19 15 0- —
Ditto, red lead	20 0 0-20 10 0
Ditto, white	27 0 0-30 0 0
Ditto, patent shot	22 10 0-23 0 0
Spanish	18 15 0- —

REMARKS.—The Whitsun holidays have, as usual, rather interfered with business during the past week, and, consequently, the Metal Market has remained quiet, and without evincing any activity. It is to be hoped, however, that when the present week has passed away somewhat more life will be manifested in the market. Unfortunately, the last mail from India brought in very few orders indeed, which has, consequently, added to the dulness, and, from the accounts received, metals do not appear to be in an improving condition there. With regard to two metals holding a prominent place in the market, announcements have been made of a decline in prices in the course of the week, which will not have a tendency to make matters better, and it is very unsatisfactory to find that after what appeared to be a revival in trade, followed by an improvement in prices, that this should have been so temporary, and so soon have given way again to lifelessness in business, and a decline in prices. Still, we must look forward with hope to the return of more favourable appearances in the market, and that in the future the improvement may not be so evanescent. Fortunately, the Money Market has become less stringent, and at present there does not seem any fear of a further advance in the Bank rate, which would tend very seriously to affect the already depressed condition of trade generally. The state of our relations with the United States is now certainly more favourable, as it seems from the advices received that no instructions have been given to Mr. Motley, the new American Minister, who is now on his way to this country, with regard to the Alabama claims; and, as the condition of the public mind in the United States seems to be much calmer upon the subject, we may hope that no serious consequences will arise, and that our relations with them will remain undisturbed.

COPPER.—On Tuesday the smelters announced a reduction of 2*l.* per ton, making present prices 74*l.* for tough cake, tile, and ingot, 76*l.* for best selected, and 78*l.* for sheets and sheathing, since which the demand has rather improved. For foreign the market is flat, Chili bar being quoted 67*l.* 10s. to 68*l.* cash; ores remain at 14s. per unit.

IRON.—In Staffordshire the trade shows very little change. The continental demand is pretty good, and Russia is taking a large quantity. Orders from the United States are somewhat restricted, in consequence of the feeling of uncertainty which the recent manifestation respecting the relations of that country with England have excited. In Welsh about the usual degree of vitality is evinced in the rail department, buyers being indisposed to purchase to any considerable extent at the current quotations. Russian requirements are large, and from the United States there is a good enquiry. There is a moderate demand for bars. Last month the exports reached 21,329 tons, of which New York took 7253 tons. In Swedish iron there has been rather more enquiry during the week, and a better business has been done. In Scotch pig-iron the market has continued dull throughout the week, and on account of the holidays here little business has been done; the price has receded to 50s. 7d., 50s. 7½d. cash.

LEAD.—The market has remained very quiet during the week, and only a moderate amount of business has been done, but towards the close rather more enquiry has arisen. Prices are still easy.

TIN.—On Monday the smelters of English announced a decline of 3*l.* per ton, making present prices 127*l.* for blocks, 128*l.* for bars, and 133*l.* for refined; but as sales had been previously made at or under these reduced prices, little or no actual alteration has been made in the market. In foreign little business has been done, and prices are rather lower, transactions having occurred in Straits at 132*l.* cash, and Banca at 134*l.* cash.

SPELTER still continues in active demand, the quotation for parcels on the spot being 20*l.* to 20*l.* 5s.

TIN-PLATES.—Makers are fairly placed for orders, and if our relations with America remain satisfactory purchases on account of that quarter are likely to be large.

STEEL.—Foreign is now in good request.

QUICKSILVER only in limited demand.

THE IRON TRADE—(Griffiths' Weekly Report).—The menacing speech of Mr. Sumner in the American Congress, coupled with the uniform reticence of the General President of the great Republic, has created a feeling of uneasiness in the City, which operates unfavourably on all great staple trades, which supply the export markets where British manufacturers are accustomed to contend with the rival industries of other nations. The press has handled Sumner's speech judiciously, still there is enough seen through the light of common sense in this speech to induce merchants to pause and reflect before further shipments, which involve heavy responsibilities, to a country which has repudiated the act of their own ambassador. Monday was a close holiday on the Stock Exchange; the Royal Exchange sympathised with Capel-court, and business on all the Exchanges has been flat and inanimate over the whole week. In the demand for iron nothing has turned up worthy of special remark. The rail market continues strong, but as the makers in Middlesborough and South Wales are well supplied with orders for the next six months, we have no new contracts to report. The business done this week in bars, even the best brands of North and South Staffordshire, is limited; still, in this kind of iron list prices are fully maintained; inferior brands from South Staffordshire may be readily bought at considerably lower rates. Hoops continue in good demand, but boiler-plates and ship-plates are still neglected. Tin-plates have not been enquired for so much this week; in fact, two large orders for New York have been taken off the market by the merchants here. Copper is flat, with less disposition to do business. English tin reduced this week 3*l.* per ton. Straits maintains former prices, and continues firm. Spelter is easier. Lead is quiet, with little business doing. Swedish iron is inactive, with prices drooping.—Quicksilver: Price unchanged; demand very dormant.—75, Old Broad-street.

THE COPPER TRADE.—Messrs. Pitcairn-Campbell and Co. (Liverpool, May 14).—The market since our last has shown a continued declining tendency, and we close at a reduction of 3*l.* per ton on Chili bars and 3d. per unit on ore and regulus. The demand for English copper is also far from active, and second-hand parcels are pressed for sale. Quotations are 68*l.* for Chili bars, 73*l.* to 74*l.* for Urmeneta ingots, 14s. for good ore and regulus, and 15s. nominally for Corocoro Barilla. Business transacted during the fortnight comprises on the spot here 655 tons bars, at 68*l.* to 69*l.* 10s.; to arrive here 100 tons bars, at 71*l.* 10s.; 1000 tons regulus, at 14s. to 14s. 1½d.; and 690 tons ore, at 14s. On the spot at Swansea, 1080 tons regulus, at 14s.; to arrive at Swansea, 300 tons regulus, at 14s. 3d.; and 600 tons ore, at 14s. 1½d.: total, about 2200 tons fine. As the Swansea Ticketing 1404 tons ore sold; average produce, 14¼ per cent.; average price, 13s. 10d. per unit. Arrivals here during the fortnight from West Coast, S.A.:—Valparaiso, from Valparaiso, with 38 tons bars; Biencathra, from Guayacan, 640 tons bars.—At Swansea: Carmelita, from Tocopilla, 545 tons ores and 325 tons regulus; Coronel, from Carrizal, 138 tons ores and 457 tons regulus; Deerhound, from Carrizal, 761 tons regulus; Bertha, from Lota, 204 tons regulus, 317 tons bars, and 136 tons ingots. Stocks of copper (Chilian and Bolivian) in first and second hands, likely to be available, are—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1125	650	5400	780	200
Swansea	3389	4094	1278	154	222
Total	4514	4744	6678	934	422

Representing about 11,000 tons fine copper, against 7700 tons May 15, 1868; 8800 tons May 15, 1867; 10,500 tons May 15, 1866.

Messrs. Vivian, Younger, and Bond—The position of this article continues most unsatisfactory, and almost a panic has prevailed throughout the trade. The English smelters reduced their quotations 2*l.* per ton on May 18, making tough 74*l.*, and best 76*l.* Since then some English copper has changed hands at 2*l.* under these new rates. Burra has been done at 77*l.*, Wallaroo at 77*l.* 10s., Chili bars at 67*l.*, and it is said some regulus at 13s. 6d. These are as low, if not lower, prices than we have ever seen before, and we must say that at the close we see no indications of any reaction.

Messrs. James and Shakspeare—No sales of furnace materials are reported, buyers and sellers differing about 6d. per unit in their views. In bars we note sales of about 350 tons, most of which were taken by consumers; the rates paid were 68*l.* for special brands, but good ordinary marks are reported from that figure down to 67*l.*, closing with buyers at said price, sellers asking 10s. more; about 100 tons Urmeneta ingots fetched 73*l.* 5s. per ton. The market is altogether unsettled pending the advices from Chili, opinions being still much divided on the question as to whether that country is really producing more copper or not, which point can scarcely be satisfactorily decided for some months to come, many being firm in the belief that the apparent increase arises almost entirely from the cause stated in our circular of May 7, and that we shall shortly receive advices of light charters during as many successive fortnights as will suffice to bring the shipments of the year down to the usual average. In Australian some small sales are reported at our list prices. The smelters officially reduced English on May 18, 2*l.* per ton, making tough 74*l.*, selected 76*l.*, India sheets 78*l.*, thus closely assimilating their rates to those previously current in the market; a fair business has been done since the reduction, and some makers are refusing orders at full list prices, especially when raw descriptions are required.

THE TIN TRADE.—The Standards of Tin Ores and Prices of Metal were reduced on Monday, and are now as follows:—Ores: Common, 114s.; superior common, 115s.; fine, 116s.; superior fine, 118s.—Metal: Common, 127s.; refined, 133s.

The MINING SHARE MARKET has been dull this week, and very little business transacted in shares generally. Those most in demand have been Prince of Wales, South Herodsfoot, West Chiverton, West Frances, East Grenville, Don Pedro, Wheal Margaret, East Caradon, and a few others. The standard declined 1*l.* 15s. this week, and early in the week there was a fall of 3*l.* per ton in tin. West Chiverton, 49 to 51; at the meeting, to be held on Friday, the usual dividend of 2*l.* per share will be declared. Chiverton Moor, 3¼ to 3⅜; Chontales Gold, 37s. 6d. to 30s.; Cook's Kitchen, 12½ to 13½; Drake Walls, 18s. to 20s.; Don Pedro, 4⅜ to 5; East Caradon, 7 to 7¼; East Lovell, 5⅜ to 6¼; Frank Mills, 4 to 4¼; Frontino and Bolivia, 15s. to 17s. 6d.; Great Laxey, 19 to 19½; Great North Laxey, 19s. to 21s. East Grenville shares have been firmer, at 4⅛ to 4⅜; at the meeting, held on Tuesday, the accounts showed liabilities over assets, 381*l.* 9s. 5d., and a call of 1s. per share was made. The copper ores sold during the quarter realised 1078*l.* 10s. 5d.; tin, 131*l.* 1s. 2d. The agents cannot name the exact quantity of ore which will be sampled for the quarter, but they have confidence it will much exceed the last in quantity and quality. Great Wheal Vor, 16¼ to 17⅛; Herodsfoot, 44 to 46; Marke Valley, 8 to 8¼.

Prince of Wales, 28s. to 30s.; at the meeting, held on Thursday, the accounts showed a profit on the quarter of 292*l.* 4s. 11d., a cash balance in hand of 1546*l.* 13s. 10d., and assets over liabilities of 1900*l.* 18s. 1d. The lode in the 65 west is worth 50*l.* per fathom, and the various points in the mine in the aggregate valued at 163*l.* per fathom. The first sale of ore in the quarter, included in these accounts, realised under 500*l.*, and did not yield a profit, so that the profit on the three months appeared small. The sale on Thursday last, which comes in for the first of next quarter, realised, with carriage, 785*l.*, and a good profit. Mineral Bottom, 3 to 3⅜; New Lovell, 1¼ to 2; North Treskerby, 13s. to 15s.; Providence Mines, 33 to 35; South Condurrow, 32s. to 34s.; South Frances, 15 to 16. South Herodsfoot shares have been in demand, and have advanced to 22s. 6d., 25s. St. John del Rey, 15½ to 16; Tincroft, 17⅛ to 18; West Frances, 50 to 52½; West Seton, 170 to 180; Wheal Basset, 60 to 65. Wheal Buller, 14 to 16; at the meeting, on Thursday, a call of 1*l.* per share was made. The value of the different points of operation in the mine is 138*l.* per fathom, and good results looked for at the junction of the lodes. Wheal Chiverton, 2⅜ to 2⅝; Wheal Crebor, 10s. to 12s. 6d.; Wheal Mary Ann, 13½ to 14½; Wheal Seton, 55 to 60.

Wheal Uny, 3½ to 3¾. Devon Great Consols, 190 to 210; at the directors' meeting, on Friday, a dividend of 4*l.* per share (4096*l.*) was declared from the profit on two months. After payment of this dividend there remains a balance in hand of 11,431*l.* 11s. 5d. The dividends paid by this company since 1845 have amounted to 1,150,976*l.*; the copper ores sold, 2,892,692*l.* 13s. 5d.; dues paid to Duke of Bedford, 226,906*l.* 12s. 9d. According to the report, a great point in the mine seems to be the 130 fm. level, on the south lode, at Wheal Josiah. In the 115 there was a magnificent course of ore for 200 fathoms in length, and this held good below the 115, in Lucas's winze, 10 fms., and in Painter's winze 12 fms.; these were 43 fms. apart, and each worth 100*l.* per fm., leading the agents to look forward with the greatest confidence to the laying open of immense quantities of ore in the 130; but up to the present time, although it is proving productive for ore, it is not so rich as expected, though it may yet turn out so in the remaining unexplored ground. The new south lode, which runs through the entire length of the sett, is presenting the most encouraging indications, at some places worth 3 tons of copper ore per fathom, and the agents look forward to important discoveries here. Holmbush and Kelly Bray, 4 to 4¼; Van, 32¾ to 33¼. At Botallack meeting, on Wednesday, a dividend of 16*l.* per share was declared, and upwards of 1000*l.* was carried forward.

The Market for Mine Shares on the Stock Exchange during the week has been very quiet, but prices have been fairly maintained. West Chiverton shares are rather firmer, at 49⅜ to 50¼. Van shares have further risen to 32½, 33½, and a large business doing; the lode in the cross-cut is very rich, and all other points of operation maintain former value. Great Vor shares are more offered, at 16 to 16¼. Great Laxey shares are rather firmer, at 18¾ to 19¼, and in demand. Snaefells are enquired for at 10s. Chontales, after rising to 1⅜, close flatter, at 1⅜ to 1½. Don Pedro, 4⅛ to 4⅜; Frontino, 15s. 6d. to 16s. 6d.; Yudanamutana, 1⅛ to 1⅜; St. John del Rey, 15½ to 16½; Anglo-Argentine, 1-16th to 3-16ths prem.; Taquaril, 2s. 6d. to 3s. 6d. prem.; General Brazilian, 3s. 6d. to 4s. 6d. prem.; Port Phillip, 1⅜ to 1½; Rossa Grande, ¼ to ½ prem.

IRISH MINE SHARE MARKET.—The holiday-time just ended had a depressing effect on the prices of mining shares, some securities having been put forward for sale, while the attendance of buyers was exceptionally small. Mining Company of Ireland shares had but one transaction, at last week's quotation. Wicklow Coppers were more freely dealt in, at a slight reduction, the closing price being from 11*l.* to 10*l.* 17s. 6d., or about 5s. per share (2*l.* 10s. paid) under previous price. General Mining Company for Ireland shares brought the same price as last week, 15s. each, but leave off weak. Killaloe Slate Quarry shares were done at 16s. 6d., against 17s. brought a few days since. From the county Wicklow we have encouraging reports respecting the trade in iron pyrites, shipments from Kingstown having considerably increased during the last few days, with gradually improving prices. The Wicklow Harbour Committee, formed by a few local gentlemen, are said to have, after much trouble and red-tape-ism, at last succeeded in procuring a loan on the security of the harbour dues, which will enable the town to rescue the work, suspended nearly 12 years ago, from further destruction, and to complete the harbour sufficiently to encourage an increase of the shipping to and from that convenient port.

At the Truro Ticketing, on Thursday, 3617 tons of ore were sold, realising 14,044*l.* 18s. The particulars of the sale were:—Average standard, 104*l.* 11s.; average produce, 6⅝; average price per ton, 3*l.* 18s.; quantity of fine copper, 229 tons 9 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
April 22 ..	2826	£109 3 0	6¼	£4 2 0	13s. 1d.	£65 7 6
„ 29 ..	1606	98 1 0	8⅛	5 5 6	12 11	64 9 6
May 6 ..	1859	101 10 0	6⅞	4 6 0	12 4	61 17 0
„ 20 ..	3617	104 11 0	6⅝	3 18 0	12 3	61 4 0

Compared with the last sale, the decline has been in the standard

1*l.* 15s., and in the price per ton of ore about 2s. 3d. Compared with the corresponding sale of last month, the decline has been in the standard 4*l.*, and in the price per ton of ore about 5s.

At Botallack Mine meeting, on Wednesday, the accounts for the three months showed a credit balance of 422*l.* A dividend of 320*l.* (16*l.* per share) was declared, and 102*l.* carried to credit of next account.

The directors of the Devonshire Great Consolidated Copper Mining Company, at their board meeting, held yesterday, declared a dividend of 409*l.*, being 4*l.* per share, arising from profits on sales of copper ores sampled in the months of January and February last, and on sales of arsenic. After payment of the same there remains in hand a balance of 11,431*l.* 11s. 5d. in cash, ore bills not at maturity, and reserved fund, applicable to the general purposes of the company.

At St. Ives Consols meeting, on Tuesday, the accounts for the three months ending March showed a credit balance of 669*l.* 4s. The profit on the three months' working was 950*l.* 7s. 10d. A dividend of 470*l.* (10s. per share) was declared, and 199*l.* 4s. carried to credit of next account. Capts. Martin, George, and Pollard reported upon the various points of operation. It was unanimously resolved that the thanks of the adventurers be given to the lords of the mine—the lords of the Bolton estate, Mr. J. A. Stephens, Dr. Rosewall, and others—for their very great liberality in having resigned their dues for so long a period during the late depressed state of the mine, thereby having enabled the adventurers to carry on the workings with undiminished activity, and employ a large number of people, who would have otherwise been thrown out of work.

At Prince of Wales Mine meeting, on Thursday (Mr. J. G. Watson, F.G.S., in the chair), the accounts showed a balance of assets over liabilities of 1992*l.* 18s. 1d., and a profit upon the quarter's operations of 293*l.* 4s. 11d. It was agreed that the balance should be carried forward. Details elsewhere.

At the Wheal Buller meeting, on Thursday (Mr. H. Milford in the chair), the accounts showed a debit balance of 600*l.* A call of 1*l.* per share was made.

At Laguna Silver Mining Company meeting, on Monday (Mr. Hill in the chair), it was agreed that the capital of the company be increased by 5000*l.*, and that such increased capital be raised by means of preference shares.

At the General Mining Association meeting, yesterday (Mr. J. Bridge in the chair), the resolutions previously passed were confirmed, by which the Deed of Settlement was altered to enable the directors to raise additional capital, and with the assent of the directors a committee of shareholders was appointed to examine into the affairs of the association, and report thereon.

COAL MARKET.—The fresh arrivals this week only number 88 ships. The demand for all descriptions of coal has ruled dull, and we quote a reduction of from 3d. to 6d. per ton, only two cargoes remaining unsold. Hetton Wallsend, 16s. 9d.; Haswell Wallsend, 16s. 3d.; South Hartlepool Wallsend, 14s. 6d.; Tunstall Wallsend, 13s. 9d.: 55 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, Liverpool, we learn that the quantity of coal exported in April was 860,851 tons, against 933,515 tons in the corresponding month of 1868, showing a decrease of 72,664 tons. The particulars are—From the Northern Ports, 457,700 tons; Yorkshire, 28,937 tons; London, 4589 tons; Liverpool, 27,855 tons; Severn Ports, 267,887 tons; and Scotch Ports, 73,883 tons. The increase was—From Northern Ports, 30,238 tons. The decrease was—Yorkshire, 18,275 tons; London, 376 tons; Liverpool, 21,578 tons; Severn Ports, 32,280 tons; Scotch Ports, 30,393 tons. Total, January to April, 2,848,188 tons; January to April, 1868, 2,862,936 tons: decrease, 14,748 tons.

SEPARATING COPPER, &c., FROM SILVER AND GOLD.—The invention of Mr. R. PEARCE, of Swansea, for improvements in the separation of copper and other metals from silver and gold, the same being applicable to other metallurgical operations, relates especially to the purification of silver which has been precipitated from its sulphate, nitrate, or chloride by copper, but is also applicable to the analogous treatment of gold and other metals; but in this specification the treatment of silver is hereinafter referred to, as the application of the present invention to gold and other metals, and for the separation of copper, iron, and other heavy impurities from tin ore, and also in the manufacture of sulphate of copper and in other analogous operations, will be well understood by persons conversant with metallurgical processes. The impure silver is placed on a filter in a boiler; water is added, together with a small quantity of sulphuric acid, the proportion of the latter necessarily varying with the amount of copper present, as will be well understood; steam with atmospheric air mingled therewith is then admitted by means of an injecting apparatus; violent ebullition ensues, and the copper becomes oxidised and is dissolved by the sulphuric acid. Should the ebullition become too violent it may be checked by admitting less air. After being boiled in this way for about two hours the solution of sulphate of copper is drawn off, the silver stirred so as to make it a little more granular, a fresh supply of water which has been slightly acidulated with sulphuric acid is added, and the mixture is then boiled for about one hour. The solution is afterwards drawn off and the silver carefully washed with clean water. The silver when dry has only to be melted in crucibles for fine silver, refining in the usual way by means of lead being quite unnecessary. In the event of a little silver passing into solution towards the close of the operation of boiling, plates of copper may be introduced into the boiler for a few minutes and the air excluded; any traces of silver that may have passed into solution will thus be precipitated.

SOUTH FRANCES AND WEST BASSET.—The settlement of the dispute between West Basset and South Frances Mines, appointed to be decided by Mr. Kingdon, barrister, has been postponed until next October, some difficult point of law having occurred in West Basset evidence.

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Apply in person, or by letter, post paid, to Mr. FOURDRINIER, 4, Hill-street, Peckham, London, S.E.

TO CAPITALISTS.

THE ADVERTISER is OPEN to AN OFFER for a SLATE QUARRY, possessing extraordinary advantages in facilities for working, contiguity to railway, low royalty, long lease, and unmistakeable proofs of a genuine slate rock, as seen in levels and present workings.

Want of funds to clear top rock, and to extend slate-making, is the sole reason of this advertisement appearing.

All further particulars can be obtained from "Quarryman," Post Office, Carnarvon.

FLUOR-SPAR.—A LARGE QUANTITY of the above, of the very best quality, FOR SALE.

For further particulars, apply to Mr. MATTHEW GREENE, 14, Pinner's Hall, Old Broad-street, London, where samples may be seen.

INVESTMENTS IN LEAD MINES.—The DIVIDENDS paid by LEAD MINES for the year have DOUBLED in AMOUNT in the last ten years, and are likely to continue to increase. Some of the young lead mines will probably become profitable, and rise greatly in value in a short time. Full particulars, with a MAP of the Cardiganshire and Montgomeryshire districts (including Van, Dyliffe, Plynlimmon, East Darren, South Darren, Lisburne, Cwmystwith, Cefn Brwyno, and other mines), can be obtained (price 1s.) on application to J. H. MURCHISON, Esq., No. 8, Austinfriars, London, E.C.

ABRIDGED PROSPECTUS OF THE

LISBURNE CONSOLS SILVER-LEAD MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

Provision has been made in the Articles of Association in conformity with the Companies Act of 1867, to issue Share Warrants for paid-up shares, by which the shares pass from hand to hand without any form of transfer.

OFFICES OF THE COMPANY.

12, NORTH BUILDINGS, BROAD STREET TERMINUS, LONDON, E.C.

The Lisburne Consols Silver-Lead Mine is situate in the parish of Ysgytty, county of Cardigan. The property is west of the Lisburne Mines, and two of their finest and most productive lodes—Glogfaur and Glogfach—extend to the Lisburne Consols sett, besides three other parallel lodes which have been ascertained by recent researches, the whole forming the richest group of lodes perhaps ever discovered.

Applications for the unallotted shares in this promising mine may be made at the offices of the company, where forms of application and every information respecting the property and prospects, may be obtained, and specimens of the ore seen. GEORGE CARNE, Secretary and Manager.

FOR SALE.

LOCOMOTIVE, PUMPING, AND WINDING ENGINES

By leading builders, and at greatly reduced prices;

STEAM CRANES, BOILERS, CASTINGS, WAGONS (on sale or hire);

RAILS, CHAIRS, POINTS and CROSSINGS, SLEEPERS, WIRE and HEMP ROPES, and every description of RAILWAY and MINING PLANT (new and secondhand).

Particulars and quotations on application to—

T. E. MINSHALL,
QUEEN STREET CHAMBERS, WREXHAM.

TO COLLIERY PROPRIETORS.

UPWARDS of 6000 LARCH, 4000 OAK POLES, 200 OAK and OAK PLANKS upwards of 20 feet long; ELM COAL-PIT RINGS, ready cut, in stock.

All kinds of ENGLISH TIMBER supplied in the round, and OAK and LARCH SCANTLING cut to sizes for railway and coal-wagon building.

Dealer in all kinds of BRITISH TIMBER.

MILLWRIGHTS, ENGINEERS, COACH BUILDERS, WHEELWRIGHTS, &c., supplied on the most reasonable terms.

JAMES ATKINSON,
No. 63, GRANBY ROW, MANCHESTER.

IMPROVED APPLICATION OF WATER POWER.

THE TURBINE.

MAC ADAM BROTHERS AND CO., ENGINEERS, SOHO FOUNDRY, BELFAST, after twenty years of experience, have brought their IMPROVED TURBINE to great perfection.

It is applicable to all practicable heights of fall, giving much greater power from the water than any other kind of water-wheel.

On low falls it has the great advantage of not being impeded by floods or backwater.

It is particularly well adapted for situations where the quantity of water is variable, and where all other wheels fail.

Its motion is extremely regular, and, when desired, a governor can be applied effectively.

This wheel is at work in a great many places, to which reference will be given.

STEAM ENGINES & ECONOMY OF FUEL.

B. DONKIN & CO.

Are now making their PATENT HORIZONTAL STEAM ENGINES, by which great ECONOMY OF FUEL is attained, the price being at the same time very moderate for this class of engine.

These engines have been accurately tested as to consumption of fuel, and have been sufficiently long at work to prove their durability and efficiency.

Employers of steam power can have their engines easily tested by a simple and inexpensive apparatus, by which the comparative consumption of steam is ascertained, irrespective of the difficult questions of evaporative power of boilers and quality of fuel.

Apply to—

B. DONKIN & CO., ENGINEERS' WORKS,
BERMONDSEY, LONDON, S.E.

DYNAMITE, OR NOBEL'S PATENT SAFETY BLASTING POWDER.

DYNAMITE is the SAFEST and most POWERFUL BLASTING COMPOUND in general use. Accidents are almost impossible, as it is only exploded by a strong percussion cap. It will not explode from a spark or concussion. If set fire to, it burns quietly and harmlessly away, without smoke or any explosion. Prepared in cartridges for mines and underground workings. Sold by—

WEBB AND CO., CARNARVON,
Sole consignees in England from the Patentee and Manufacturer.

Halifax Corporation Water Works—Hebden Extensions.

TO CONTRACTORS.

CASTLE CARR TUNNEL CONTRACT.

THE WATER WORKS COMMITTEE are PREPARED to RECEIVE TENDERS for this CONTRACT, which comprises the DRIVING of a TUNNEL about 2500 yards in length, and the SINKING of the necessary SHAFTS, including all masonry and other work connected therewith.

The plans and sections, with specifications and quantities, may be seen at the Town Hall, Halifax, and at the offices of Mr. BATEMAN, the Engineer, 9, St. James's-square, Manchester.

Copies of the bills of quantities may be obtained on payment of one guinea.

Sealed tenders, endorsed "Tender for Castle Carr Tunnel," to be sent to me on or before Tuesday, the 15th June next.

The Committee do not bind themselves to accept the lowest or any tender.

By Order, J. E. NORRIS, Town Clerk.

Town Hall, Halifax, 19th May, 1869.

JOHN MARSHALL, Deceased.

PURSUANT to the Statute 22d and 23d Victoria, cap. 35, intituled "An Act to further Amend the Law of Property, and to relieve Trustees," Notice is hereby given, that ALL CREDITORS and OTHER PERSONS having any CLAIMS or DEMANDS upon or against the estate of JOHN MARSHALL, late of No. 69, Hunslet-road, in Leeds, in the county of York, out of business, formerly of Mill-street, Meadow-lane, in Leeds aforesaid, Chemist and Druggist, deceased, who died on the 16th day of March last, are hereby REQUIRED TO SEND IN, on or before the 1st day of July next, the PARTICULARS of their respective DEBTS or CLAIMS upon the said ESTATE, with the nature of their securities (if any) to me, as solicitor for Mrs. Elizabeth Marshall, the widow and administratrix of the said deceased, or in default thereof the said Elizabeth Marshall will proceed to distribute the assets of the said deceased among the parties entitled thereto, having regard only to the claims of which she shall have had notice, and will not be liable for the assets so distributed to any person of whose claims she shall not have had notice at the time of such distribution.

JOHN EVERARD UPTON, 6, East Parade, Leeds
(Solicitor to the said Administratrix).

Dated the 20th day of May, 1869.

DON PEDRO NORTH DEL REY GOLD MINING COMPANY (LIMITED).

INTERIM DIVIDEND.

Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the company will be HELD at the London Tavern, Bishopsgate-street, on THURSDAY, the 27th May, at Two o'clock, to authorise the directors to pay an INTERIM DIVIDEND.

The directors will propose the payment of 3s. per share, for the three months ending 31st March, 1869, being at the rate of upwards of £85 per cent. per annum, the sum of £2750 and the profit for March being carried forward for the quarter ending 30th June.

The Transfer Books of the company will be closed from the 19th to the 27th May, both days inclusive. By order of the Board,

JOHN E. DAWSON, Managing Director.

52, Moorgate-street, 19th May, 1869.

ANGLO-ITALIAN MINING COMPANY (LIMITED).—Notice is hereby given, that the SECOND ORDINARY GENERAL MEETING of the company will be HELD at the London Tavern, Bishopsgate-street, on FRIDAY, the 28th day of May instant, at Two o'clock precisely, for the transaction of the business of the company, including the election of auditors.

By order of the Board,
WILLIAM FLETCHER, Secretary.

35A, Moorgate-street, 15th May, 1869.

THE TAQUARIL GOLD MINING COMPANY (LIMITED).—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the shareholders of the company will be HELD at the London Tavern, in the City of London, on TUESDAY, the 25th instant, at Two o'clock precisely, for the purpose of passing a special resolution for cancelling, altering, and varying some of the regulations contained in the Articles of Association.

Auditors will also be elected at this meeting.

By order, FREDK. R. BLUETT, Secretary.

51, Moorgate-street, London, E.C., 17th May, 1869.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
April 27	Caldbeck Fells	6	£13 16 6	Stock and Co.
—	ditto	37¼	11 2 0	Sims, Willyams, & Co.
May 14	Great Laxey	100	22 17 0	Burry Port Company.
15	Llanerchyraur	65	13 1 6	Walker, Parker, & Co.
18	Trewetha	35½	24 13 0	R. Michell and Son.
19	Stiperstones	80	12 4 6	Burry Port Company.
20	Wheal Mary Ann	47	23 16 6	Stock and Co.
—	ditto	48	14 18 6	Sims, Willyams, & Co

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
May 19	Stiperstones	20	£3 13 6	Kenrick and Son.

BLACK TIN.

Date.	Mines.	Ts.	c.	q.	lbs.	Price p. ton.	Amount.	Purchasers.
May 14	Great Wheal Vor	49	18	3	13	£ —	£3777 14 4	—
15	Wheal Uny	8	6	3	2	72 15 0	606 12 4	Redruth Co.
—	Penhalls	13	10	2	10	76 5 0	1031 12 5	—
19	Wheal Buller	7	7	0	6	74 0 0	544 1 11	Mellanear.
—	ditto	1	13	2	21	56 0 0	94 6 6	ditto

COPPER ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
April 24	Caldbeck Fells	6¼	£19 5 0	Bibby, Sons, and Co.
—	ditto	7¾	8 10 0	ditto

COPPER ORES.

Sampled May 6, and sold at the Royal Hotel, Truro, May 20.

Mines.	Tons.	Price.	Mines.	Tons	Price.
Devon Great Consols.	133	£4 12 6	East Caradon	78	£3 7 6
ditto	125	3 0 6	ditto	71	5 4 0
ditto	123	4 7 0	ditto	46	2 4 6
ditto	122	5 12 6	Okel Tor	84	4 14 6
ditto	120	4 18 0	ditto	81	1 10 0
ditto	114	2 8 0	Bedford United	75	2 11 6
ditto	107	2 10 6	ditto	55	3 6 0
ditto	96	1 10 6	Wheal Friendship	62	1 6 6
ditto	86	5 0 6	ditto	33	7 0 6
ditto	85	2 10 0	ditto	23	6 6 0
ditto	83	5 4 0	Kelly Bray	89	3 12 0
ditto	82	2 6 6	ditto	11	10 11 6
ditto	57	1 5 6	Prince of Wales	35	8 14 0
ditto	53	3 5 6	ditto	34	5 4 6
ditto	22	0 19 0	ditto	30	9 5 6
ditto	11	2 18 0	Brookwood	68	2 11 0
Marke Valley	94	2 15 6	ditto	22	1 11 0
ditto	81	6 9 6	Gunnis Lake (Clit.)	48	5 0 0
ditto	80	3 4 6	ditto	40	5 15 6
ditto	79	5 5 6	Wheal Crebor	32	3 17 6
ditto	63	2 8 6	ditto	31	4 11 0
ditto	50	5 9 0	Bampfylde	62	11 16 0
ditto	40	1 2 6	Wheal Russell	50	1 18 6
Wheal Crelake	71	5 9 0	Belstone	20	9 10 0
ditto	68	2 15 6	ditto	12	2 5 6
ditto	55	2 8 6	Sortridge Consols	19	4 7 0
ditto	46	7 18 6	ditto	7	7 12 0
West Maria & Fortes.	80	3 8 6	Mary Florence	22	4 3 6
ditto	77	2 5 0	Wheal Maudlin	10	3 16 6
ditto	64	5 15 6			

TOTAL PRODUCE.

Devon Great Cons.	1419	£5058 13 6	Brookwood	90	£ 207 10 0
Marke Valley	487		Gun. Lake (Clrs.)	88	470 0 0
Crelake	240	1930 6 6	Wheal Crebor	63	265 1 0
W. Maria & Fortes.	221	816 17 0	Bampfylde	62	731 12 0
East Caradon	195	734 16 0	Wheal Russell	50	96 5 0
Okel Tor	165	518 8 0	Belstone	32	217 6 0
Bedford United	130	374 12 6	Sortridge Consols	26	135 17 0
Wheal Friendship	118	458 17 6	Wh. Mary Florne.	22	91 17 0
Kelly Bray	100	436 14 6	Maudlin	10	38 5 0
Prince of Wales	99	760 8 0			

Average standard..... £104 11 0 | Average produce 6⅝
Average price per ton £3 18 0
Quantity of ore .....3617 tons | Quantity of fine copper..229 tons 9 cwts.
Amount of money £14,044 18 0
LAST SALE.—Average standard..... £101 10 0—Average produce..... 6⅞
Standard of corresponding sale last month, £109 3 0—Produce, 6¼.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	379	£2476 0 0
Freeman and Co.	256½	1582 4 3
Grenfell and Sons	370	1688 8 9
Sims, Willyams, and Co.	215	1457 8 0
Williams, Foster, & Co.	672½	3078 19 9
Mason and Elkington	212	665 19 0
Bankart and Sons	309	579 13 6
Copper Miners' Company	378	1076 8 3
Charles Lambert	498	1439 16 6
Total	3617	£14,044 18 0

Copper ores for sale at the Royal Hotel, Truro, on Thursday next—Mines and parcels.—Clifford Amalgamated 709—South Caradon 540—Glasgow Caradon 310—Poldice Mines 260—Phœnix Mines 200—West Caradon 142—Craddock Moor 92—North Treskerby 11—West's Ore 70—Wheal Rose 32—Wheal Busy 32.—Total, 2475 tons.

A LARGE AMOUNT of MONEY being EXPENDED in ADVERTISING in WORTHLESS PUBLICATIONS, C. H. MAY will be HAPPY to AFFORD INFORMATION to ADVERTISERS in the SELECTION of the BEST and MOST INFLUENTIAL.

C. H. MAY'S GENERAL ADVERTISING OFFICES.

ESTABLISHED 1846.

ADVERTISEMENTS Inserted in all the London Provincial, Foreign, and Colonial Newspapers.

78, GRACECHURCH STREET, CITY, E.C.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

LUCY PHILLIPS.—Shareholders are invited to subscribe 20,000*l.* upon mortgage: but it would seem that the first point to be settled is—What has the Lucy Phillips Company to mortgage beyond the machinery? I do think we should know something more before we can be expected to subscribe, particularly when I have been informed upon the best authority that although at the meeting in February, 1868, it was stated that Mr. Graham, the vendor of the property, "had taken in lieu of purchase-money paid-up shares, which he had not sold, thus showing his confidence in the success of the enterprise"—yet, in face of this positive statement, it is said that within four months upwards of 3000 shares had been transferred, of which a large proportion were sold. Again, it was understood that the vendors' shares were tied up, but I am informed that of the 12,000 between 5000 and 6000 have been sold. Are these things true? – A SHAREHOLDER.

VAN MINE.—In reply to "A Subscriber," it may be stated that the mine has been the property of the company for little more than three months, and, therefore, no dividend has yet been paid to the shareholders, the profits up to the period the mine came into the hands of the company having been divided among the private owners. It is understood that a meeting will be held in about a month hence, for the purpose of declaring the first dividend. A perusal of the details of the first general meeting, and the other information which appeared in last week's Journal, will fully acquaint "A Subscriber" with the position and prospects of the mine.

IRON AND COAL TRADES OF SOUTH YORKSHIRE.—In this article, in last week's Journal, where reference is made to the Rotherham, Masborough, and Holmes Colliery, 61 lines from top, 700 tons should have been stated as the quantity, and not 7000.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MAY 22, 1869.

COLLIERY RESPONSIBILITY.

How few of the public, comparatively speaking, realise any adequate idea of the responsibility of the colliery proprietor. The great majority of those who "sit at home at ease," if they ever condescend to bestow a thought upon collieries at all, commiserate with the lot of the collier, who has to work underground day and night in obtaining the "precious diamonds;" but the colliery proprietor is regarded in the light of an exceedingly lucky individual, who having expended a few hundred, or it may be a few thousand, pounds in the winning of coals, may sit down for the remainder of his days, reaping large profits, and bereft of those cares and anxieties which beset the lot of the other portions of the community. The popular view is generally a fallacious view, and the force of this expression is fully exemplified in reference to the light in which the colliery proprietor is regarded by the great majority of the public. This is at once apparent to all who have a practical acquaintance with colliery management, or any experience of colliery proprietorship. Everybody knows that, however carefully a colliery may be laid out, however zealous and attentive the supervision, and however adequate the ordinary ventilation, a score of things conspire to render accidents liable at any moment, causing, it may be, a large sacrifice of life, and possibly reducing the comparatively wealthy proprietor to a state verging upon bankruptcy. Probably there is no large undertaking in which the whole working machinery is more liable to become suddenly deranged, and the works brought to an abrupt termination, entailing enormous loss upon the proprietor, and that without any fault in the management or blame in the proprietorship; and thus it is that the colliery proprietor has responsibilities and anxieties which few appreciate, and the great majority altogether ignore.

Almost innumerable instances may be cited in support of these statements. Every now and then the whole kingdom is electrified by the awful news that another colliery explosion has occurred, in which, probably sudden atmospheric change has been the main element in bringing about such a disastrous catastrophe. In another instance it may be that a most trivial accident has set fire to the colliery, in which the fire has raged for several successive weeks, baffling every ingenuity and device of the manager to extinguish. Or it may be that a single stroke from a pitman's pick has broken into some abandoned workings, the long pent up waters have rushed into the pit, carrying destruction before them, and entailing a loss upon the proprietors which none but the most wealthy can withstand, and which is positive ruin to many. These and other causes which will readily present themselves to the minds of the colliery manager and colliery proprietor, will show the anxieties and responsibilities which they have to contend with, and also point to the object which we have in view in now alluding thereto.

As the representative of the mining community, it is not only our duty to endeavour to protect their interests, and advocate measures which shall promote and advance their welfare, but also to suggest means that shall be to their mutual advantage. We suppose that it will be readily granted that the colliery interest is second to none in the United Kingdom: coal first, and iron secondly, have mainly built up the prosperity of this country. The colliery proprietors consist of some of the most wealthy capitalists and influential men in the kingdom, but also some whose whole means have been expended in the opening up of the colliery. There is, thus, every element necessary for a powerful and well-organised "Mutual Aid Society," and we confess it has often struck us as singular that some such insurance society has not long since been established in connection with the mineral interests. The principle of the many helping the few is now so well understood and universally recognised, that we need not enlarge thereon. Almost every large interest has some such society, specially adapted to its requirements, and its working has been most mutually advantageous. Why should not a "Colliery Proprietors' Insurance Society" be at once established? the object of which should be to render its members aid in the event of any of those sudden calamities to which we have referred. Whenever an explosion has happened, scattering death, it may be, through scores of families, and entailing the most serious pecuniary loss upon the proprietors, should the assistance of the public be required to alleviate the sufferings and privations of the bereaved, the proprietors of the pit have sometimes been taunted that it is their duty to provide such assistance. Such taunts are, of course, most unjust and unkind, but, at the same time, we know they have been so keenly felt in some instances that the proprietors of the pits in which accidents have occurred have refused all extraneous aid, and taken the responsibility of providing for widows and orphans upon themselves. The noble example of Mr. H. H. VIVIAN, M.P., in connection with the Morfa Colliery will always shine conspicuously in illustration of what we have now said; but however willing and anxious other proprietors may be to follow such an example, they are altogether incapable of doing so. In such cases a Mutual Aid Society, or an Insurance Society, would step in most opportunely, relieving the distress of the afflicted and bereaved, affording pecuniary assistance, if need be, to the colliery proprietor to cover the loss sustained, and putting it out of the power of the public to throw out such taunts as some are always too happy to indulge in.

We throw out this sugestion to the colliery proprietors in the very best spirit, and with the best intentions, believing that such a society as we have alluded to would prove advantageous. We should certainly like to see our suggestion considered and acted upon. We are sanguine enough to believe that it is not only feasible, but if taken up by proprietors generally would soon result in the establishment of a powerful and well-organised society. Modern legislation undoubtedly tends to increase colliery responsibilities. Let the colliery proprietors see if they cannot help themselves in time of need. We believe some scale of life premium could be easily ascertained, upon which certain sums should be secured in case of death from accidents in collieries, and weekly allowances in the event of disability. To this fund the collier himself should be called upon to subscribe, and "educated" by being shown the advantages of insurance, which would be merely an extension of the system now universally adopted for medical attendance and medicine; and if the colliers found the proprietors associating themselves, and supporting the Insurance Society, they would, we think, readily respond to the appeal made. The colliery proprietor could insure against pecuniary loss by the annual payment of an amount proportionate to the quantity of coal worked; and if some such scheme were carried out it would, to a great extent, relieve proprietors from those anxieties and responsibilities, which they must all feel, arising from the possibility of some sudden accident happening which might destroy the workings, and entail upon them heavy pecuniary loss. When no great calamity agitates the mind is the best time for a calm consideration of any scheme of general advantage. The present, therefore, is most opportune, and we hope the suggestion we have made, crude though it may be, will be acted upon, and carried to a successful issue.

Government Inspection of Coal Mines.

THE INSPECTORS' REPORTS.

The reports of the several Inspectors for 1868, as well for coal mines as for the mines of ironstone of the coal measures, have just been printed, and, upon the whole, may be considered very satisfactory. In 1867 the return showed a decrease of 294 in the number of deaths, as compared with the preceding year; and in the year now reported upon (1868) there is a decrease of 179 in the number of deaths, as compared with 1867. In the number of separate accidents there is also a satisfactory decrease, the number being 860 in 1868, against 907 in 1867. Each year appears to show one district, not always the same one, especially unfortunate, the regular average of about 1000 deaths per year for the entire kingdom being thus constantly maintained. In 1868 the West Lancashire and North Wales district is that which was more heavily visited, and it would be interesting to discover whether there is not a direct connection between the strikes of the coal miners and the subsequent calamities—in the case of the district now under consideration there certainly appears to be.

Mr. HIGSON tells us that the year began by a three months' strike of the coal miners of South-West Lancashire, during which all mining operations in that locality were entirely suspended, and it terminated with a succession of such deplorable casualties and loss of life as had not for years before happened in the district. Mr. HIGSON attributes them to the stagnation of trade, the excitement of the times, and the parliamentary elections, as well as to the long strike; but as these are causes which were equally in operation throughout the kingdom, yet did not increase the number of fatalities elsewhere, the argument does not appear to be tenable. With regard to the strike, the case is different. During the strike at the commencement of the year the men were, without doubt, much reduced in their circumstances, and things which contributed to their domestic comfort during the winter were gradually made away with, until by the time the strike ended they were reduced to comparative, if not absolute, poverty; their homes were ruined, and they were without the means of re-establishing them. During the summer, the privations not being so severely felt, the time passed on without the occurrence of any great calamity; but on the return of winter, when the position that had been lost was sorrowfully looked back upon, everyone was seeking to compensate for the time he had lost, and in the effort to get quantity at all cost, the necessary safeguards were neglected, and the calamities, which so greatly added to the number of deaths, increased. In Mr. HIGSON'S district four accidents, which would appear to be attributable to this cause, resulted in no less than 106 deaths. We subjoin our usual tabulated summary, which will permit of the several classes of accidents being compared:—

COAL MINES—1867.

	Separate Accidents.					Deaths Resulting.				
	Explosions of Fire-damp.	Falls of Roof and Coal and Sides of Working.	In shafts.	Miscellaneous, underground and at surface.	Total.	Explosions of Fire-damp.	Falls of Roof and Coal and Sides of Working.	In shafts.	Miscellaneous, underground and at surface.	Total.
North Durham, Northumberland, Cumberland districts..	—	31	8	32	71	—	31	18	32	81
Southern division of Durham..	1	28	2	43	74	1	29	2	45	77
North and East Lancashire....	8	30	10	23	71	18	30	12	24	84
West Lancashire & North Wales	8	53	15	42	118	23	53	16	42	134
Yorkshire district	1	40	13	30	84	1	41	18	30	90
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire.....	2	25	11	21	59	4	25	11	24	64
North Staffordshire, Cheshire, and Shropshire	11	25	15	10	61	17	27	20	10	74
South Staffordshire & Worcester.	7	58	14	16	95	18	60	16	17	111
Sou.-West Div. (parts of Monmouth, Gloucester, Glamorgan, Brecon, and Devon....	6	38	10	15	69	6	39	10	16	71
South Wales district	4	65	14	36	119	185	67	15	42	309
Eastern district of Scotland....	6	23	14	8	51	11	23	14	12	60
Western district of Scotland ..	2	24	6	3	35	2	24	6	3	35
Total	56	440	132	279	907	286	449	158	297	1190

COAL MINES—1868.

North Durham, Northumberland, Cumberland district	3	28	16	20	67	3	30	16	20	69
Southern division of Durham ..	1	35	10	38	84	1	36	10	40	87
North and East Lancashire....	4	33	6	18	61	5	33	8	19	65
West Lancashire and Nth. Wales	12	58	18	38	126	116	62	18	41	237
Yorkshire district.....	5	35	11	26	77	6	36	11	27	80
Derbyshire, Nottinghamshire, Leicestershire, and Warwickshire	1	24	9	24	58	1	24	9	26	60
North Staffordshire, Cheshire, and Shropshire	7	28	8	14	57	9	28	10	14	61
South Staffordshire & Worcester	2	55	16	17	90	3	58	21	22	104
Sou.-West. Div. (parts of Monmouth, Glo'ster, Glamorgan, Brecon, and Devon)	1	43	5	10	59	1	44	5	12	61
South Wales district	3	49	8	40	100	4	49	8	43	104
Eastern district of Scotland....	1	24	8	8	41	1	25	9	8	43
Western district of Scotland ..	4	20	7	9	40	4	20	7	9	40
Total	44	432	122	262	860	154	445	132	281	1011

IRONSTONE MINES—1867.

South Durham	—	1	—	—	1	—	1	—	—	1
Yorkshire district.....	—	—	—	—	—	—	—	—	—	—
Derby., Notts., Leic., & Warwick	—	—	3	2	5	—	—	3	2	5
North Staff., Cheshire, & Shrop.	1	13	6	2	22	1	14	6	2	23
South Staffordshire & Worcester	—	7	1	—	8	—	7	1	—	8
South-Western Division.....	1	9	2	2	14	1	9	2	2	14
South Wales district	—	5	—	1	6	—	5	—	1	6
Eastern district of Scotland....	1	1	2	2	6	1	1	3	2	7
Western district of Scotland ..	1	4	1	—	6	1	4	1	—	6
Total	4	40	15	9	68	4	41	16	9	70

IRONSTONE MINES—1868.

West Lancashire & North Wales	—	—	—	—	—	—	—	—	—	—
Yorkshire district.....	—	—	—	—	—	—	—	—	—	—
Derby., Notts., Leic., & Warwick	—	2	4	1	7	—	2	4	1	7
North Staff., Cheshire, & Shrop.	2	10	4	5	21	2	10	4	6	22
South Staffordshire & Worcester	—	6	3	2	11	—	6	3	2	11
South-Western Division.....	—	13	—	3	16	—	13	—	3	16
South Wales district	—	6	2	—	8	—	6	2	—	8
Eastern district of Scotland....	—	—	—	1	1	—	—	—	1	1
Western district of Scotland ..	—	2	1	1	4	—	2	1	1	4
Total	2	39	14	13	68	2	39	14	14	69

With regard to the number of male coal miners employed in and about the coal mines of Great Britain, the number of fatal accidents and lives lost, the quantity of coal raised, and the proportion of accidents and lives lost to the number of persons employed, and to the tons of coal raised in the year, the figures for 1868 are considerably more favourable than those for the preceding year. With the single exception of Mr. HIGSON'S district, there appears to have been a general improvement, whether judged of from the increase in the number of persons employed for each separate fatal accident, or for each life lost, or from the increase in the number of tons of coal raised to each casualty. The subjoined tables will enable a comparison of the several particulars to be readily made:—

1867.

Names of districts.	As computed by each Inspector for his own district.		Per separate fatal accident.	No. employed per life lost.	Tons of coal raised per separate fatal accident.	Tons of coal raised per life lost.	Number of collieries.
	Males employed.	Tons coal raised.					
Northumberland, Cumberland, & N.Durham	26,321	11,005,500	370	325	115,007	135,870	167
South Durham.....	37,000	15,442,000	500	481	208.676	200,545	169
North & East Lancashire	26,820	6,844,000	377	319	96,394	81,476	281
West Lancashire and North Wales.....	30,000	8,350,000	254	224	70,762	62,313	160
Yorkshire	37,000	9,850,000	440	411	117,261	109,444	434
Derby, Nottingham, Leicester, & Warwick	27,000	7,600,000	457	422	128,814	118,750	200
Nth. Stafford, Cheshire, and Shropshire	21,000	6,000,000	344	284 244	98,360	81,081	222
S. Stafford & Worcester..	27,100	10,268,000	285	366	108,084	92,594	540
Monmouth, Gloucester, Somerset, and Devon	26,000	6,500,000	377	95	94,203	91,549	228
South Wales	29,300	9,092,300	246		76,406	29,425	329
Totals—England & Wales	283,041	90,951,800					
East Scotland	29,000	7,897,368	568	483	154,851	131,622	254
West Scotland	21,075	6,228,575	602	602	177,959	177,959	[illegible]
Totals, Scotland	50,075	14,125,943					
Totals & averages, England, Wales, Scotland	333,116	105,077,743	367	280	115,852	88,300	3195

1868.

Northumberland, Cumland, & Nth. Durham	32,000	11,400,000	477	462	170,149	165,217	175
South Durham.....	37,000	15,300,000	440	425	182.142	175,862	171
North & East Lancashire	26,360	7,053,000	432	405	115,623	108,508	292
West Lancashire and North Wales.....	32,000	7,600,000	254	135	60,317	32,067	208
Yorkshire	37,000	9,705,000	480	462	126,039	121,312	459
Derby, Nottingham, Leicester, & Warwick.	28,000	7,699,000	483	466	132,741	128,317	195
Nth. Stafford, Cheshire, and Shropshire	21,000	6,000,000	368	341	105,263	98,360	225
S. Stafford & Worcester..	28,000	9,900,000	311	269	110,000	95,192	550
Monmouth, Gloucester, Somerset, & Devon..	26,000	6,200,000	441	426	105,084	101,639	201
South Wales	29,300	9,000,000	293	281	90,000	86,538	300
Totals—England & Wales	293,660	89,857,000					
East Scotland	29,000	8,456,084	707	674	206.246	196,653	254
West Scotland	21,160	6,253,875	504	504	156,346	156,346	203
Totals, Scotland	50,160	14,709,959					
Totals & averages, England, Wales, Scotland	346,820	104,566,959	403	343	121,589	103,429	3262

The above tables really embrace all the general statistics contained in the reports, and a large amount of information as to the precise circumstances under which the several accidents happened is given in the reports for each district. As usual, the reports supply many valuable suggestions and observations of a practical character, those embodied in the subjoined extracts being among the number:—

NECESSITY FOR CARE IN REMOVING TIMBER.—Referring to two accidents from fall of roof, each resulting in the death of a deputy-overman while removing timber where the roof was no longer required to be supported for the purpose of working the coal, Mr. ATKINSON remarks that the fatality arising from this class of accidents is much higher amongst the deputy-overmen, who are employed to protect the lives of the ordinary workmen, than amongst the workmen themselves. The occupation of deputies is of a highly dangerous character, and he again urges upon them the necessity of looking to their own personal safety, and the same time that they do not neglect to attend to that of others.

COMPLAINTS FROM WORKMEN.—During the past year Mr. ATKINSON had two complaints from workmen, one from Brasside Colliery, belonging to the Earl of Durham, as to defective ventilation, and on making an inspection of the mine he found the complaint was not made without reason: the viewer agreed to suspend the working of the pit until a proper furnace, then in the course erection, was completed. The other complaint was from a workman at Shincliffe Colliery, belonging to Messrs. Love and Spark, and also related to ventilation; in this case, too, he found some cause for the complaint, and obtained a satisfactory promise that immediate steps should be taken to remedy the evil.

The complaints received by Mr. WARDELL during the year have not been numerous. He has investigated them, and when they were based upon substantial grounds, succeeded in getting his suggestions and recommendations fairly carried out.

UNDERGROUND EMPLOYMENT AND EDUCATION OF BOYS.—The instances of boys being employed in the mines of Mr. ATKINSON'S district under the age at which educational attainments are required by the Mines Inspection Act are so very rare that he seldom comes into contact with them, unless in rare instances of mere suspicion that the parents of a boy may have overstated his age for the purpose of getting him so employed. There are, he believes, a very few exceptional cases where certificates as to the boy being able to read and write are obtained from a schoolmaster when the boy is professedly under 12 years age, but even in these cases he believes that they are also required, for the most part, to attend school for the hours that are only required by the Act in the event of their not being certified as being able to read and write. The very few instances in which boys under 12 years of age are employed underground are, he has reason to suppose, mostly in cases where the mother is a widow, or the family large or in bad circumstances.

The subject of the education of miners' children will, Mr. WYNNE hopes, again be brought prominently forward, and something be done to fix the responsibility of allowing boys under age to work in mines on the parents, who well know the age of their children, and should be held responsible for the education and proper training of their boys. Whenever he sees a boy in the pit whose age appears doubtful, the answer to his question is, "Oh I'm just turned 12," from which the inference may be drawn that they are pretty well schooled on that subject.

PRECAUTIONS AGAINST ACCIDENT.—As the best means of making well known the precautions which appear to be generally requisite at present in his district, Mr. DICKINSON has communicated directly with each colliery, pointing out that—1. The miners require to be frequently cautioned to set sprags and props, as large blocks of stone and coal, which sound solid, fall without warning.—2. Trams or wagons should be more carefully secured from getting loose on slopes or inclines. And before wagoners are allowed to take wagons down a slope, it should be ascertained that they can stop the wagon if required, so as to avoid overtaking and running over their fellow-wagoners who are in advance, and to give persons on the road time to get out of the way; and where there is only one line of rails, to avoid coming into dangerous collision with anyone pushing a wagon up the slope.—3. In blasting, an iron, instead of a wooden or a copper, rammer is still too often used in getting the wadding and first part of the stemming fairly bedded on to the powder; and shots which have missed fire are still drawn, although experience shows that, even with water in the hole, the drill goes in advance, and fires the powder. The best way [illegible] to put a small shot near enough to fire both charges. The practice of taking barrels and large quantities of powder down the pit should be discontinued.—4. As to ventilation, a recent decision of the judges shows that parts of the mine which are not being worked, but to which a person could find access, or from whence gas might issue, so as dangerously to affect any working place or travelling road, have to be kept ventilated as well as the working places and travelling roads. The appointed station for work persons to stop at should, therefore, be carefully defined and adhered to. And he gave notice that he requires covers to be provided and used overhead when lowering or raising persons in all working pits or shafts, except in those worked by a gin or windlass, or whilst sinking or pump work is being done; or, in special cases, where written exemption is obtained from me annually.

After congratulatory observations upon the fact that only one death by carburretted hydrogen occurred in so fiery a district as his, Mr. BROUGH says that notwithstanding this good result we must continue to be unrelaxing, and leave no exertion unattempted, either legal or technical, to fight against this scourge to the coal miner. Amongst other efforts he would recommend that, in any new enactment, the three words "under ordinary circumstances" be omitted; that would render clear and distinct the first general rule of the present statute, and in his opinion would contribute to the saving of human life. Another great step would be to abandon altogether the use of gunpowder for the bringing down of coal in mines liable to fire-damp. Furthermore, air in abundance, no stint of safety officers, and the selection of the best possible class of safety-lamps, are all most essential provisions. On this latter subject it is needful to state that if at the speed of 8 ft. per second an ordinary "Davy" (and some lamps of other kinds) will pass the flame, then indeed our confidence becomes rudely shaken. But we must remember that though 8 ft. per second is the rate of travel of the air often arrived at in the intakes (and even still more than that) of fairly ventilated collieries, it is by no means the fact that explosive mixtures are always met with passing at such a high speed, unless it be gas from some tremendous blower, and even that requiries some little space of time to mix it up to the highest point of danger. Nevertheless, the able experiments lately entered into underground in the North give rise to serious thought, and demand especial care in the use of the "Davy," or, indeed, for that matter, of any other sort of lamp at present in use in all Britain.

The special rules in Mr. WARDELL'S district with regard to the use of timber are very stringent, and justly so. It is, therefore, the duty of each in his station to do his utmost to see every rule carried out in its integrity. There is no rule more neglected, and none which in its violation produces so great a loss of life, as that which orders the miners to set short "props" or "sprags" at least every [illegible] yards, in "holing" or "baring" the coal. Much depends upon the miners themselves. In many cases an accident is the result of their wilful disobedience

of this rule; and the utter disregard to safety which is too frequently displayed would indeed be incredible to all those who are practically aware of the stern and veritable fact. Of course many of these falls occur when even all apparent care is taken, from "slips" in the roof, "partings," and other similar causes: the roof in such cases which has fallen and buried the unfortunate miner will, an instant before, sound perfectly solid and safe. It is the duty of all concerned in a mine to take every known and approved means for preventing accident; and so far as regards accidents from falls, where so much depends upon a regular and judicious use of timber, it is the duty—first, of the owners and agents to have at all times a sufficient supply of the same within reach; secondly, of the stewards and deputies to see, so far as they possibly can, every time they visit a man in his working place, that he is carrying out the rules by a proper use of this timber; and thirdly, it is incumbent on the men themselves to take all due precaution for their own lives, and use every available means of safety which lies within their power.

There can be no greater mistake than to imagine that either a scant and insufficient supply of timber on the one hand is a pecuniary gain, or, on the other hand, that an obstinate refusal to use it when there is a saving of time. It is an established fact, though proved perhaps by a lamentable experience, that true economy consists in safety. The use of properly constructed fence-gates at the top of shafts is becoming more general. He invariably advocates their adoption, as there is no doubt that they constitute a great safeguard, and are the means of preventing many accidents from persons falling down shafts.

THE CHARACTER OF COLLIERS.—Speaking of the men, upon whom, in a great measure, the safety of our coal mines depends, Mr. HIGSON admits that in the number employed there are many trustworthy men; but there are a great number who are ignorant of their business, and who are, if not reckless, actually negligent and unthoughtful. Many, I may say a majority, can neither read nor write, though such are not generally the least to be relied on. Intemperance is one great and primary cause of incapacity and neglect, and to it may be traced the origin of many casualties. The close proximity of beer-houses to the mines and works under consideration is an evil which loudly calls for legislative interference. It may be argued that the owners of mines should employ more competent men to act as firemen. But such men are scarce in this district. Within the last 10 years the out-turn of coal has been nearly doubled; this has caused a great number of strangers to be employed—strangers not only to the workings of these mines, but to the dangers by which they are surrounded, from gas, &c., and whose characters for skill, sobriety, and care, are unknown. The best colliers also can now get higher wages than formerly, and, consequently, prefer getting coal to being employed as firemen, which would take them from home at a much earlier hour in the morning. This scarcity will continue till such times as a class of young and better educated men have been trained for the office, and are capable of efficiently discharging the various and important duties which the nature of the appointment invariably requires.

MANAGEMENT OF MINES.—For the purpose of raising the standard of the management of mines, Mr. HIGSON considers that it is necessary that the underlookers and firemen should be trained for the better discharge of their duties, for which at present no provisions have been made. Some years ago a Mining School was established at Wigan, but it has made little or no progress. The lectures given there have been scientific, not practical, and to the sons of those persons who could obtain instruction in other places. No practical teaching or technical learning of the men who have to manage our mines has been attempted, so that those who stand so much in need of further information have hitherto derived no benefit from any source whatever. If the Wigan Mining School were to be re-arranged, so that a number of hours in every week could be set apart for instructing underlookers and firemen to discharge more efficiently their very difficult and onerous duties, greater advantages to the owners and workers of mines would immediately accrue. Lectures on chemistry to uneducated men are nothing less than time wasted, as the result already proves. It is much to be regretted that the owners of collieries do not in all cases select for underlookers and firemen a better class of men, and that they omit to have them specially trained for their duties. It still too often happens that the chief manager is not a competent miner; in such instances the underground officers are not as a rule judiciously selected, which renders the supervision not only difficult, but defective. Proper provisions are either deferred too long or inadequately made, the purchase of materials becomes irregular, and an honest statement of facts in due time is invariably withheld. If the chief manager of a mine has not sufficient practical knowledge a viewer or mining engineer should be employed to superintend the working and ventilation of the same. And in all mines the underlookers and firemen should not only be able to read and write, but they should have sufficient knowledge of ventilation, of the best mode of fixing supports for the roof and sides of the mine, of opening out the same, so as to remove the material thereof at the least possible cost, and with the greatest safety during present and future operations, and to acquire that authority and control over the workpeople, in the absence of which all attempt at management completely fails.

The workpeople are rough, and in many instances disobedient; they do not properly observe the provisions of the special rules. They neglect to prop and sprag the roof and sides of the mine. They descend and ascend the pit contrary to published instructions. They charge shots defectively, which frequently blow out in a vitiated atmosphere, and cause an explosion. If the roof sounds well in answer to the blow of a hammer, they neglect to prop it till it falls and causes loss of life. They run the boxes below ground at a random pace, regardless of anyone being in the way, by which loss of life or serious personal injury frequently happens. They open or interfere with their safety-lamps, so as to enable them to smoke below ground, which is strictly prohibited. By these and other such irregularities such accidents have happened. It is seldom, however, that they have been caused by old and experienced colliers or mining men, but chiefly by strangers to the mine, or those who began late in life to follow the employment, or by the young and inexperienced. It may show a great want of discipline, but that most important element in mining is most difficult to establish and maintain.

Referring to an information laid by him for violation of rules, Mr. WARDELL adverts to the fact that managers, like the one in this instance, are too frequently to be met with at small collieries where there is no very great output, and a comparatively small staff of officials. They are respectable men in their proper position, but quite out of place as managers of mines; and so long as such owners will not employ a better class of men as their managers, and offer sufficient inducement to obtain the services of experienced and skilled men, they must not be surprised if such accidents as these accrue. The magistrates, very properly, were most severe in their censure of the owner, and the general arrangements at the colliery. It is a matter of great thankfulness that the injuries to the unfortunate persons did not terminate fatally. The owner has promised, for the future, strict attention to the General and Special Rules.

METEOROLOGICAL OBSERVATIONS, AND COLLIERY EXPLOSIONS.—Mr. BROUGH gives a series of interesting remarks upon this subject.

PERMANENT RELIEF FUND.—It is satisfactory to find that for the relief of the distress which colliery accidents have produced a large sum of money has been given by the public. It would, however, Mr. HIGSON thinks, be a source of comfort to the survivors of the deceased, and to those who get injured in the mines, if a permanent relief fund could be established on a good basis. Such a scheme has been seriously considered of late by some of the large employers of labour; and, although it is still far from being fully matured, circumstances must ultimately render such aid to their deliberations as to bring them to a successful issue. The owners and workers of mines should co-operate, and contribute fair and reasonable proportions to the fund, out of which proper relief should be judiciously given.

At times when unusual disasters occur in mines much sympathy is manifested for the sufferers among all classes throughout the country, and the question of how best to relieve them in such cases has of late been attracting the attention of the sympathising and kind. It would, in Mr. ALEXANDER'S opinion, be a great achievement if some well devised scheme of universal application could be introduced, calculated to alleviate such awful calamities, and partially lighten the gloom thrust so suddenly on many a bereaved home; and probably the most practical and least objectionable would be a general system of insurance to which every underground workman should be compelled to contribute, supplemented by public and private contributions from the owners of mineral estates, colliery owners, and gentlemen of wealth and influence, so comprehensive as to assist the disabled and to provide for the widows, and fatherless, and orphans of all who may lose their lives while engaged in or exposed to the risks and dangers of the mine.

GOVERNMENT INSPECTION.—The extraordinary and rapid development of the coal fields of this country, the large increase in the quantity of coal raised, as well as the great area of coal necessarily worked from deep shafts, ought to be taken into consideration in estimating a comparative death-rate from accidents in mines. Mr. EVANS is fully satisfied that, up to this, inspection of mines has been attended with beneficial results; but, as regards the important question of more frequent and more complete inspection, he is of opinion, having given the whole question his most earnest consideration, and having had a long experience as an Inspector (nearly 30 years), that any great extension of the system of inspection will not be attended with good results; it would have the effect of relieving the owners and agents of that responsibility which properly belongs to them, and them alone. To make an Inspector in any way responsible for the safety of the mine, there will have to be as many of them as there now are colliery viewers. The Inspector is always in his district, ready to investigate accidents, and to give advice in any matter presenting a difficulty. Possibly some of the districts may be too large; a re-arrangement of them, and the appointment of one or two additional Inspectors, would, he believes, meet the present wants. No amount of inspection will prevent accidents altogether in an occupation attended with so much danger; all that can be done is to reduce them to the lowest possible point. Of late years, since the passing of the Mines Regulation Act, marked improvement has taken place in the management of mines, in the employment of better machinery, and in the generally more efficient ventilation of them.

Judging from the calamities of the year, Mr. HIGSON considers the result shows that the boundary of inspection had been reached, that the ground beyond is extensive, and in many instances a waste and comparatively uncultivated tract, and that the time for its proper cultivation and enclosure has become an obvious necessity. On the continent of Europe even females of tender age, and boys at the age of 10 years and upwards, are allowed to work in the mines, but competent persons only are permitted to take a part in the management of the works.

OBJECTIONS TO AUTOMATIC LIFE-SAVING APPLIANCES.—There has been much ingenuity displayed for some years past in apparatus of divers kinds to act effectually when a rope breaks, and some of the methods arrived at are, no doubt, worthy of praise. But in this class of accident, as in the employment of safety-lamps in fiery mines, the contingency may arrive that neglect ensues; in the case of the lamps it may possibly give rise to restricted air passages, and equally so with the other life-preserving inventions there may ensue an indifference as to the integrity of the pit ropes, or, lulled into a feeling of security, to the efficacy of the patent machinery itself, and then, perhaps, may arrive a great calamity. In his opinion, there are no life-saving means that surpass vast initial strength in the usual winding apparatus itself; he prefers this open and straightforward method to the use of contrivances whose very principle may render them liable to entanglement and derangement. It is absolutely necessary to be alive to all improvements and new processes, and to a certain extent to exert ourselves to help on that which we believe to be beneficial. But practical knowledge alone can be relied on; experience always upsets mere theory. However, it is but just to observe that if an invention really possesses merit and originality it is sure of final success; in the end it cannot fail to be generally adopted. But he must repeat, that in abundant original force will be found the maximum means of safety. Even this should be accompanied by great sectional area in the pit, for there must be room for the plenitude of power. And, besides, there ought always to be a sufficient number of shafts; in the end it will be found not only safer, but far more economical than putting all the strain on one, or even two openings. It was at one time feared that legislative interference on the point of additional shafts would extinguish the existence of many collieries. It does not appear, however, that the Act of Parliament passed in 1862 has had that effect; on the contrary, since that measure came into operation there has been as much, and even more, elasticity in the coal trade than ever there was before.

THE LONG WALL AND PILLAR AND STALL SYSTEMS.—The accidents from falls of coal and roof, exactly 50 per cent. of the whole, are rather under the average of bygone years, and, with two exceptions, they happened to the sufferers while working at the coal face, or while engaged taking down part of the roof and securing it. The duty devolves entirely upon the workmen to protect themselves from falls of roof within a given distance of the face of their working places, and a decrease in this class of accidents may fairly be attributed to greater care on their part. The immunity from casualties of this description appears, Mr. ALEXANDER observes, to be much greater in mines where the "long wall system" is practised; and though more than a half of the coal has been raised by that method for the period to which this report refers, 80 per cent. of the fatal accidents from falls of coal and roof happened in mines worked by the "stoop and room" system.

PROBABLE EXHAUSTION OF COAL.—In the interest of the teeming population of Mr. BAKER'S district, whose occupations depend upon the continued supply of coal, it is to be desired that the mineral resources of this coal field should be economised as far as possible, especially that portion of it which is practically and commercially applicable to the manufacture of iron. Considering the quantity annually raised, the coal seams now available are, he thinks, very much nearer exhaustion than the trade and some of the people of the district seem to be aware of, or are, at any rate, willing to admit. This question was mooted by him several years ago, and briefly alluded to in his report of last year; the opinions he then offered have been fully confirmed by the enquiries he has made during the past year.

The produce of some of the larger collieries is mainly sold for domestic use, and at a price far beyond that generally given by the iron trade. With the exception of these, scarcely any owners or agents to whom he has spoken have named so long a period for the duration of their collieries at their present rate of working as he was himself disposed to assign, and as the small and inferior collieries die out the demand will, of course, be greater on those that may still remain, and thus the calculations as to time will be proportionally shortened. His observations apply chiefly to the iron trade of the district, and he does not allude again to this subject to cause unnecessary alarm, but simply to keep it before the mining public, so that no further opportunity may be lost, either in thought or action, with a view to ascertain what available resources exist on the opposite sides of the great western and eastern faults of this coal basin.

It is to be regretted that excellent opportunities in our extreme east and west collieries at West Bromwich and Essington have already been allowed to slip by, where trials might have been commenced in the Permian rocks at the respective depths of 400 and 200 yards. Such opportunities are rarely met with in this coal field, as depths from the surface, varying from 400 to 600, and probably 800 yards, might have been reached with suitable machinery, which would have gone far towards determining the question of the existence of coal in those localities.

The duration of the coal field, and how to economise it, has now become a subject of interest, and as old leases expire more stringent regulations are introduced into new ones, principally relating to the modes of working, and occasionally the order in which the seams are to be worked. The matter is entirely in the hands of the proprietors of lands and their advisers; and, in Mr. ALEXANDER'S opinion, probably it would tend to systematise arrangements if some recognised and judicious system were strongly recommended, which, without interfering with private rights, would have a tendency to check or guard against any unnecessary waste of this invaluable source of national wealth. The modes of working coal are "stoop and room" and "long wall." The former admits of endless variety of procedure; in some cases pillars of coal are formed with the view of being afterwards taken out wholly or in part, and in other cases the tenant is held bound to leave a given proportion of the coal for the purpose of maintaining the roof and surface; but by the latter, while there may be slight variations in the mode of extraction, still the important result is in nearly all cases the same, the whole of the coal is obtained, and in the best marketable state. The more stringent regulations referred to consist mainly in defining that certain seams shall be worked by "long wall," or that a system of forming pillars at first working shall be carried out, so as to give a reasonable security that they shall be afterwards worked away, or, if temporarily abandoned, not lost. Apparently there are few seams so situated as to prevent the introduction of the "long wall" method, and in practice he finds that this judicious system is carried out in every description of seam, and under an endless variety of conditions. It is a lucky circumstance in this case that the mode of working best adapted for economising the seam of coal is also the safest in so far as relates to falls of coal and roof, that constant source of accidents in all mines; and it is important to know that though upwards of a half of the coal got in this district during the past year was by the long wall system, only 20 per cent. of the lives lost by falls of coal and roof took place in such mines. These unfortunate occurrences go on without intermission, and seem very little affected by the means hitherto adopted to prevent them; but if by changing the system of working a greater immunity from accidents could be obtained for the persons who work in mines, and a more complete exhaustion of the coal field carried out, then the subject is well deserving of attention, and ought to enlist the interest of both the economical and humane.

UNDERGROUND HAULAGE—THE TAIL ROPE.—Referring to miscellaneous accidents in his district, Mr. BROUGH says that entanglement by chains on inclines, the breaking of engine bank ropes, the crush of trams in levels, cross-headings, and stalls, and the careless or ignorant use of gunpowder, are the leading accidents under this head. With regard to persons getting seriously and too often fatally crushed, he can only say that in his district many of these levels and cross-heading are narrow, the trams that are used are large and heavy, and casualties are thus continually brought about, often added to, by the employment of hauliers too young and weak to "back" and "shaft" those ponderous vehicles on headings of considerable and varying gradients. It is not as in other parts, where the tub and its load is not half the weight that it is in Monmouthshire, Breconshire, and Glamorganshire; in the North of England young drivers are adaptable, because of the habitual light lodes there, but not so in the division of mines under his charge. Then, again, the taking away by these very hauliers of the young trappers with them, far from their doors, is a practice that he altogether protests against. Since he has been in the district his lists will show that the lives of very many of these mere tender children have been so sacrificed. If all collieries were laid out for the tail-rope system of transporting products underground, the killing of hauliers and other young persons, and the wearing out and destruction of poor horses, would be greatly lessened indeed.

SAFETY ARRANGEMENTS IN COLLIERIES.—As the result of a careful estimate, Mr. MOORE finds that of the persons employed every fifteenth person is employed in looking to the safety of the others, in the shape of manager, overman, deputy-overman, fireman, and overlooker. There are, therefore, in this district 2000 persons employed by those companies to keep the pits safe for 29,683 persons engaged in and about mines in working and conveying coal from the face until it is put into wagons at the surface. Where the safety of the persons employed does not depend upon themselves, it depends upon these 2000 persons, and the degree of safety which they afford depends upon the discipline and control exercised by the owners and principal agents, who alone have the control of this large staff. No important alteration can be made unless they sanction it; they propose the special rules, and can make application for their amendment at any time, and it is in their power, either by their own observation or by employing other skilled persons to do it for them, to see that the special rules are observed, and that proper discipline is maintained by the regular staff. He has constantly urged this view of the duties or owners and principal agents, and especially of the benefit to be derived from close personal attention to the underground working arrangements. He believes that supervision would be most effectually done, where the owner himself does not personally exercise it by a person not constantly employed in the colliery, but who periodically visits it, and examines the working arrangement. When we consider that year by year the pits in this district are becoming deeper, and consequently the machinery and arrangements increasing in magnitude, the decrease in the loss of life is creditable to the owners and managers of mines, and should stimulate them to persevere in making and adopting such arrangements as will lead to still better results. There can be no doubt that the adoption of the best means for increasing the safety and comfort of the workmen is true economy in a commercial point of view.

COAL AND IRON IN THE UNITED STATES.—The Chesapeake and Ohio Railroad Company is pushing its works rapidly forward, and expects to reach the mouth of the Big Sandy River shortly. The Tredegar Iron Works, of Richmond, Virginia, have contracted to furnish 30,000 tons of iron rails for laying the track from Covington, West Virginia, to Catlettsburg, Kentucky. In April, 1868, an experiment was tried with success of making iron with mineral coal at Carondelet, Missouri. A furnace, started in April, 1868, continues in active operation, and has since produced more than 3000 tons of iron. The proprietors of the Phœnixville and Danville Iron Works, in Pennsylvania, are stated to have testified to the excellence of this iron. Its fusibility, ductility, and strength render it suitable for common and malleable castings. At first the yield of the furnace was from 60 to 70 tons of iron per week; now the mean product is 126 tons per week. A compound rail has been patented by Mr. J. H. Moore, of Chicago. The rail is made in three parts, a cap rail of steel and two side pieces of iron. The cap rail is clasped by the upper extremities of the side rails, which are held together by iron ties, bolts bent down at each end, and without heads or screws.

PROPOSED ABOLITION OF THE PATENT LAWS.—For more than seven years the Inventors' Institute has been using strenuous efforts to bring about such a salutary reform in the law relating to patents of invention as shall secure to the inventor that reward to which his ingenuity justly entitles him, and at the same time remove those objectionable features connected with the present system of granting patents which have given rise to the feeling that it would be better, in the interest of the community at large, to abolish the patent laws altogether; and the proposition of Mr. Macfie, referred to in last week's Journal, to raise in the House of Commons the question of abolishing the patent laws affords that society an excellent opportunity for showing the value of their labours to inventors, and for demonstrating the importance of co operation amongst the inventors themselves. It is absolutely necessary to impress upon all desirous of maintaining the rights of inventors the necessity of at once deciding upon a definite plan of combined action; and to remind them that the dissension which has existed amongst inventors themselves has done more to prevent the proper remuneration of the discoveries of inventions of utility than any step which has been taken by the patent law abolitionists. Every individual inventor has regarded his own proposition (though but a slightly modified copy of a dozen previous inventions) as a patentable property, yet claims that all future improvements are infringements of his rights. This line of conduct must be at once abandoned; justice must be secured both to inventors and the users of inventions. A slight modification may change a worthless invention to a valuable one; and, if this be admitted, any modification, however slight, should be recognised as a patentable invention, and the patentee should be protected against all other patentees whose inventions are not absolutely identical. Will inventors agree to this? They can scarcely refuse without adopting the other alternative—that all improvements upon an invention are covered by the original patent, which would render at least nine-tenths of all existing patents, even for inventions capable of being put into practice, worthless for want of novelty. At the present, if at any, time such an association as that mentioned would appear to be especially valuable, for as the opinions of inventors are of almost every shade between the two extremes indicated, and as each is ever ready to express his opinion publicly, it is not improbable that, in the absence of a complete counter-proposition, just in itself, and acceptable alike to patentees and abolitionists, Mr. Macfie's views will be accepted as likely to give satisfaction, and to secure justice to a larger number than could be hoped for from any amendment of the present patent laws.

REPORT FROM SCOTLAND.

MAY 19.—Not since what was here called "Black Friday"—May 11, 1866—with money at 10 per cent., and the telegram just posted on 'Change that the banking-house of Overend, Gurney, and Co. had succumbed, has quotations of Pig-Iron drooped so low as 50s. per ton; and yet, with money at a moderate premium, the absence of all panic, and a large home and a fair export trade in pigs, it would almost appear as if we were to have "Black Friday's" quotations reproduced. Foreign shipments have increased on the year to date nearly 18,000 tons, and the coastwise have increased 8000 tons, while Middlesborough imports have decreased fully 16,000 tons, which taken together make a total of 42,000 tons of increase on the year, a circumstance which should have helped prices, and which must, if continued, inevitably send prices up again to 54s. or 55s. a ton. Foundry pigs are scarce, and cannot be got from makers with regularity—helped by the decrease in imports from Middlesborough. Business opened this week in pig-iron at weak and declining prices in a very quiet market. Yesterday 50s. 10d. cash and 51s. 1½d. a month was taken, but at the close sellers required 1d. more. To-day prices slightly weaker, and about 6000 tons were done at 51s. 1d. to 51s. a month, and 50s. 9d. cash, closing buyers 1d. per ton less. No. 1, g.m.b., 51s.; No. 3, 50s.; Coltness, 60s.; Gartsherrie, 59s. 6d.; Calder, 57s.; Shotts (at Leith), 54s.; Langloan, 52s. 6d.—all No. 1 brands of makers' iron. The shipments from the various Scotch ports were 13,825 tons for the week ending yesterday, against 14,255 tons in the corresponding week last year, but it will be noticed that the difference in favour of last year is not material. With the blowing out of the solitary furnace in blast at Dundyvan the number in blast in Scotland will now be 127, as against 115 at the same period last year. A few years ago this furnace cost some 9000*l*. It is now for sale, and its lining is to be sold for scrap-iron. Manufactured Iron is quiet, and orders for bars are getting short. All kinds of angle is in demand, but plates are not so much pushed. The enquiry for merchant iron for warehouse is almost *nil*, but makers of nail rods are very busy. There is also a considerable business being done in railway chairs and pipes. Miscellaneous castings quiet. Brassfounders are in want of orders, and copper workers have too much idle time on hand. There is no change in quotations for either of the above.

Main Coal, for shipment, and Steam Coal are meeting with about an average demand, and the shipments for the week reach 34,275 tons, against 29,840 tons in the same week last year, still, at the various large works, rows of loaded trucks are waiting orders. In these circumstances the miners have made a demand for 1s. a day advance. In the Larkhall district one work was struck on refusal to concede the demand, and, the proprietors of an adjoining colliery having engaged all the "struck" men, the proprietor of the work so struck compromised matters by giving 6d. a day advance, and this advance has been conceded both in the Hamilton and Larkhall districts. The Motherwell and Wishaw miners are now agitating for a similar advance, and as there is a scarcity of hands, occasioned by emigration, and by the drilling of the militia, into which corps numbers of the miners are enlisted, this advance will, in all probability, be granted for a few weeks, till the militia are broken up. During the last few days Mr. McDonald has addressed meetings of miners on the "Mines Regulation Bill," and the "Trades Union Bill," and to-day the coalmasters discussed the merits of various amendments which they seek to introduce into the "Mines Regulation Bill."

Several pits belonging to the Dundyvan Iron Works have been sold to the Shotts Iron Company, and will be worked by them in future.

The area of the Sutherland gold fields having been enlarged by about two miles along the Suisgill Burn, the number of licensed diggers has been increased to upwards of 200, who are working on more systematic principles than formerly. Discoveries of gold have also been made on the property of Rosehall, in the same shire, belonging to Sir James Mathieson, Bart., and about 40 men are at work upon highly auriferous drift.

A SCHOOL OF MINES FOR SCOTLAND.—The following letter has been addressed by Mr. MARK FRYAR, formerly Teacher of Mining at the late Glasgow School of Mines, to Dr. BRYCE, the President of the Philosophical Society of Glasgow:—

DEAR SIR,—I am glad to find from home papers that you are again doing something in Glasgow by way of organising a Mining School, or in establishing a lecture class on mining in connection with some existing institution. The education of coal miners is a subject in which I feel warmly interested, and I shall be greatly pleased to find that you succeed in your endeavours to arrange some suitable and efficient means of instruction in the various branches of learning which bear directly upon the art of safe and economic mining. You may remember that for upwards of four years I was engaged by a committee of coal and ironmasters in Scotland, giving lectures on mining and kindred subjects to a class of students who met in one of the class rooms of the Andersonian University. For more than three years prior to this period I had been giving lectures to the students of the Bristol School of Mines, so you see, having had some experience in the matter, I may reasonably claim, at any rate, a mediocre of ability to give you some useful hints.

In the first place, I advise you to make the institution of mine teaching as liberal in its operation as class teaching can be made. Have nothing exclusive about it, so far as individual students are concerned. I suppose it does not very much concern the Glasgow College whether its students belong to the English, Welsh, Irish, or Scotch portion of the British empire, and that it cannot very much affect the value of that time-honoured institution whether its students remain in Scotland or go to Jericho to apply their knowledge to some good and useful purposes. And so it ought to be with a Mining School. It is the province of such institutions to teach, and what afterwards becomes of the student must, of necessity, be left to the great social influences which dispose of individuals in such a marvellous manner. Where Mining Schools or courses of lectures on mining subjects have hitherto been supported by contributions from mine owners, the contributors have naturally expected some almost immediate pecuniary benefit from the better training of their mine officials; but when such *employees* have been careless of instruction, or when, having qualified themselves by learning for higher pay, they go into better appointments, the contributions to the Mining School fall, and the mine owner reasonably asks why he should give a man a special education for the benefit of others. You do not find many men who can see the reasonableness of being at the expense of educating an *employee*, and then giving him a higher wage because of the qualifications obtained from such an education; and it is mainly due to this that funds for the maintenance of Mining Schools have so far failed in the provinces.

I advise you not to commence any school or lectureship unless you can see clearly your way to a permanent pecuniary provision for its establishment. You must charge fees for students, but only small in amount; not too small however. I should say not less than one guinea per session; but do not in any way depend upon fees for income, nor upon the precariousness of yearly voluntary contributions. In short, make a certain income for the support of your school or professorship, and then open your class-room door to all who may seek admission. In the second place, it is absolutely necessary that some arrangement be made for enabling young men to give a portion of their work in the mines during the time of their attendance to lessons or lectures. Men or boys cannot be expected to profit much from any source of instruction after having done an ordinary day's work in a mine. It is easy to cite instances of perseverance and endurance, where individuals have bent their whole energies to learning with a force of will only governed by animal exhaustion; but amongst the masses how rare such instances are. I have been all my lifetime among miners, and know them well; and many a hard day's work I have done myself in mines, and I can assure you that schools of mines and scientific lectures are of no manner of use to the working miner unless he has, too, the means of subsisting on about half the usual amount of labour he is expected to perform, and so physically prepare himself for mental work and for handling the instruments used in mapping and drawing. On Monday last I was down a coal mine here for four or five hours, showing the natives how to hew coal, and for the two following days I could not hold a pen in my hand to write with. The same amount of effect is not produced on hands daily accustomed to handle the pick, but you may take my word for it that the pick and the pen, and especially the drawing pen, cannot be made to operate together very well in the same hand, unless at longer intervals of operation than a few hours. It would be well if you could manage to establish some scholarships of (say) from 30*l.* to 50*l.* each, to be obtained by some kind of competition among the youths of the mining population of Scotland, such money to be used as subsistance during attendance to mining studies, or a portion of it should be applied to travelling expenses through some of the coal mining districts in England and Wales. Periodical visits to the

best mines in England, Wales, and Scotland would do more by way of instructing students in mining matters than many lessons could do.

Thirdly.—The character of the education to be arrived at is a very important matter. If you aim too high you will accomplish nothing. The miner needs some knowledge of chemistry, but time and opportunity alike will fail to lead him further into this science than what is necessary to his understanding chemical combustions of common substances, and the properties of flame and gases. He should also be taught something of geology and mineralogy, applied mechanics, and the science of pneumatics, in its bearing upon the ventilation of mines. The principles of the steam-engine, hydraulics, and mechanical drawing, should also form part of his education. But where, as in most instances is the case with miners, the mind has not been formed by a good elementary education for a facile comprehension of these branches of knowledge, you will find that your students will make generally but slow progress, even by regular attendance to class-room teaching, for sessions. What tells to the greatest advantage with the men you wish to benefit is to show, as much as possibly can be done, the practical application, step by step, of the sciences required to be taught. And in teaching the science of mining abundant scope for doing this is at the command of the teacher. Indeed, the interior of the mine itself is the most suitable class-room, and it is there that a large proportion of the lectures on mining should be given. The only other point I can notice within the compass of a letter is the necessity of having one or two itinerant lecturers, to visit periodically the larger mining villages, and to form classes in schools for teaching boys some of the sciences I refer to, and evening classes for the instruction of adults. The appointment of one or two itinerant lecturers, to work in this manner, must be a separate thing to the professorship or lectureship which you are about to establish in Glasgow; and from the classes so formed in the mining villages you may expect to draw an important supply of students for the Glasgow School. I wish you every success in the undertaking.

MARK FRYAR,
Mining Engineer for the Indian Government.

Chaudale, Central Province of India, April, 1869.

THE NORTH OF ENGLAND IRON AND COAL TRADES.

MIDDLESBOROUGH, MAY 20.—Although there is still much activity in the Pig-Iron Trade of this district, there has been no new development worthy of comment since our last report. The local demand for pigs continues to increase. This is regarded as an eminently satisfactory feature of the trade, and must tend to enhance the commercial prosperity of Cleveland. Out of 1,500,000 tons annually expected to be manufactured in the neighbourhood, a reliable local authority calculates that not more than 300,000 tons will be sent out of the district. The production in this department of the iron trade will shortly be largely augmented. At the present time the Clay Lane Company are having three furnaces rebuilt; Swan, Coates, and Co. are building two new ones; Jones, Dunning, and Co. are rebuilding one; Stevenson, Jacques, and Co. are building one; B. Samuelson and Co. are building two; Bell Brothers are rebuilding one; the Stockton Iron Company are rebuilding two; and the Norton Iron Company have one furnace smelting titaniferous ore. Besides these, others are in contemplation; and, if matters continue to look as hopeful as at present, it is not difficult to predict a long era of prosperity for the district, which enjoys so prominent a position in the manufacture of one of the chief sources of our national wealth. It is true that prices do not advance with that rapidity which we could wish to see, but given the necessary conditions to supply and demand and remunerative prices are almost sure to follow. The list rates for the past week have been—For No. 1, 2*l.* 8s. 6d.; No. 2, 2*l.* 7s.; No. 3, 2*l.* 5s.; No. 4 (foundry), 2*l.* 4s. 6d.; mottled, 2*l.* 4s.; white, 2*l.* 3s.; refined iron, 3*l.* 2s. 6d., net cash at the furnaces. Warrants, sellers 45s., buyers 44s. 6d. The shipments from the port of Middlesborough have been numerous of late, especially to Belgium, Holland, and France. The large stocks of rails which had been allowed to accumulate in readiness for the shipping season have now been cleared away, and makers' stocks are now reduced to a minimum. It is felt, however, that as yet the export coal trade is not in such a healthy condition as it should be, and there is every reason to believe that the efforts now being made in different quarters to remedy this defection will be attended with ultimate success. The cause of a complaint having been thoroughly ascertained, the cure is already half accomplished, and, thanks to the enquiries and representations of Mr. Williams and other gentlemen largely interested in the trade of the port, the way to a remedy is clear and simple, and will in due time be adopted. The Bar Iron Trade has considerably improved of late, but the advancement made has not yet been sufficiently marked to influence prices. The quotations are—For common bars, 6*l.* 2s. 6d. to 6*l.* 5s.; best ditto, 7*l.* 2s. 6d. to 7*l.* 5s. Ship plates are in good demand, at from 7*l.* 10s. to 7*l.* 12s.; boiler plates, from 8*l.* 10s. to 8*l.* 12s. Angle iron is but moderately sought after, at from 6*l.* 10s. to 6*l.* 12s. The current prices for rails are 6*l.* 10s. to 6*l.* 15s.; bridge rails for collieries, 6*l.* 5s. to 6*l.* 7s. 6d., on wagons at works, four-months bills, or cash less 2½ per cent. Foundries are doing a fair trade. Cast-iron girders fetch from 5*l.* 10s. to 5*l.* 12s.; and chairs, 3*l.* 2s. 6d. Engineers are engaged on some extensive contracts. The firm of Hopkins, Gilkes, and Co. are pushing forward the Saltburn viaduct, and they have recently taken a contract for a large lattice girder bridge over the Kynede river, near Elsingfors. It is stated that this company, which has been unfortunate hitherto in its inability to declare any dividends, will this year pay a dividend of 6 per cent. Should this be true, the directors and shareholders will find their bread returning after many days. The North and South Durham and Northumberland collieries have almost without exception to report a fair amount of business done. From Hartlepool and the Tyne extensive shipments of coal lately have been made. It is expected that the Midland Mine Agents' Institute will shortly be paying a visit to this district.

TRADE OF THE TYNE AND WEAR.

GATESHEAD, MAY 19.—The demand for Coke continues good on the Tyne—that is, for Spain—and prices are advancing; the demand for Coal for export is also improving. The arrival of vessels in the Tyne has been large lately, consisting of 400 vessels, 206 of those being coasters. The trade for house coal has been dull, and prices somewhat drooping. The trade on the Wear continues dull, especially the coasting. The foreign trade has improved in some directions, especially to the Baltic. The steam coal trade is much better, although the collieries are not fully employed yet, from four to five days per week being about the average. At the Hartlepools the arrivals and sailings have been large, and 120 vessels have sailed with coal. On the whole, the steam coal trade has greatly improved, and the coking coal trade is comparatively good, but there is yet much room for improvement in the house and general manufacturing coal trades. The shipbuilding trades and general engine and iron trades of the district are tolerably good, and many branches very brisk, but colliery winding and hauling engines, &c., continue a drug on the market, and can be had at very low prices. The iron trade continues to improve, and prices are likely to rise shortly. The rolling-mills of the district are much busier than for some time, particularly mills engaged on large work, such as rails, &c.; those engaged on merchant bars and other small work are scarcely so well employed.

Small vessels (under 1000 tons) are now fast going out, and others under this size are constantly being lengthened in the Tyne. A trial trip of one of those, the Mercury, made a few days ago, is worthy of notice. This vessel has been recently lengthened at the yard of Mr. Clelland, Willington Quay, her dimensions being now 235 ft. over all; breadth, 28 ft.; and depth, 18½ ft.; burden, 1150 tons. The engines have been converted into compound surface condensers, and two high pressure cylinders added, making the nominal power 120 horse. The surface condenser is fitted with tubes, on Horn's patent. The boilers have been put in on an entirely new principle, patented by Mr. William Hawthorn. A number of engineers were invited to witness the trial of the new engines and boilers. The measured knot was run three times. The distance run as follows:—First trial, 6 minutes 45 seconds; second trial, 7 minutes 45 seconds; third trial, 6 minutes 10 seconds. The engines indicated an aggregate of 125 horse power in a consumption of 9 cwts. of fuel per hour, or a total of 10 tons 15 cwts. The coals used were the Widdington steam. After running the measured knot she proceeded north to Cocquet Island, 18 miles distant, which she reached in 1 hour and 57 minutes.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

MAY 20.—As usual, the holidays have interfered very much with the business at the iron works and collieries during the first half of the week, but matters have now fallen into their ordinary state. Several of the lead mines, which have not been very active, are now showing signs of improvement; and the tone with regard to those at Eyam and in the Peak is more encouraging. The ironworks are by no means active, ordinary manufactured iron not showing any improvement of consequence. The furnaces, however, are still in blast, so that a large quantity of pig is being produced. There is no change in the business doing to the metropolis, which is of fully an average character for the season. There is no material change with regard to "hards," but there is every prospect of a speedy alteration for the better to the Yorkshire ports. From the Burton-on-Trent district a rather quiet trade continues to be done by the Midland to some of the Western counties, and there is scarcely so much doing from some of the pits into Northamptonshire. Seeing that the branch line of railway from Chesterfield to Sheffield is now ready for opening, we may expect to see a still larger mineral traffic than at present.

There is a moderate business being done in several branches of the Sheffield trade, heavy steel goods being in the best request, whilst the cutlery and light departments are rather quiet. The business doing on home account is not very active, but some fair orders in hand on colonial account. The iron works in South Yorkshire continue to be well employed, the demand for rails being still very good, and such is also the case with regard to most qualities of manufactured iron. At Thorncliffe the foundries for heavy pipes are kept fairly going, whilst in the lighter articles there is not so much doing. There is no alteration in the quantity of coal being forwarded to London, which is about an average of what has been sent during the last five or six weeks. There has been an improvement in the business doing to Grimsby in steam coal, the large number of wagons which not long ago choked up the railway sidings at that port having been set at liberty by the arrival of several vessels for cargoes for the North of Europe. To Hull, however, the shipping trade is rather quiet, several vessels not having returned from their first trip to the Baltic since it opened.

There is no change with regard to the disputes at the collieries in the district. At Denaby Main everything goes on quiet and satisfactory, the quantity of coal being raised in the single shift being fully as much as was ever got by the old hands. At Mr. Huntsman's collieries a good many men are now at work, and there appears to be no chance of the pits being opened to those who have so long been out on strike. The large collieries at Chapeltown and Thorncliff, belonging to Messrs. Newton, Chambers, and Co., are all but standing, there being about 20 men at work in the Drift Pit, the coal being got to supply the iron works of the firm.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

MAY 20.—The Iron Trade continues quiet. This has been a holiday week, but a few days' cessation from work occasions very little inconvenience just now, owing to the scanty supply of orders. Some of the leading makers are doing fairly, and a good many of the larger works are now preparing to roll rails, for which there are large orders to be had at a certain price. It is, however, currently said that the only inducement presented to engage in this department of the trade is that it is better to keep the works going than standing still; and that those who take the orders do not anticipate profits. There is, on the part of some of the ironmasters, an indisposition to accept specifications for rails just now, under the belief that prices will shortly rise, owing to the large requirements for railways now in progress. Pig-iron is rather flat, and prices hardly as firm. The Hardware Trades of Birmingham and South Staffordshire show, perhaps, a slight tendency towards improvement in some departments. The demand for bolts, hinges, and door locks, and for building ironmongery generally, is pretty good, and the makers at Willenhall are tolerably well supplied with orders.

The reports of the Inspectors of Mines will, of course, be noticed at length in the *Mining Journal*. It is satisfactory that this year they have been issued considerably sooner than previously, though their appearance six weeks after they were supplied does not show any very remarkable rapidity in production. A great improvement would be made in the reports if one of the Inspectors, or a Government clerk, would take the reports for past years and analyse the results, showing the decline or increase in the loss of life, generally and from particular causes, and for particular districts, in proportion to the amount of coal raised and the number of men employed in winning it. Mr. Baker and Wynne tell the same tale that is forced on people's attention by the record of every accident—that what is wanted is a more complete system with a view to avoiding accidents from causes which may fairly be anticipated, and a stricter adherence to the regulations as laid down. It is satisfactory that Mr. Baker can again report a somewhat diminished loss of life. However defective mining may yet be in South Staffordshire, there can be no question, from the result of returns, and from what is apparent to everyone in the district who has his eyes open, that colliery operations are now conducted with far greater care, and with a far stronger sense of responsibility, than they were formerly.

There was an important meeting of miners in Dudley on Monday, when a very strong opinion was expressed, and a resolution adopted, in favour of the surplus of the Hartley Colliery Fund, given to South Staffordshire, being applied as was originally intended—to the relief of the sufferers from colliery accidents and of those dependent upon them, instead of being employed for the purpose of making an addition to the funds of the South Staffordshire Hospital, at Wolverhampton. At the same meeting the Bill before Parliament for the Consolidation and Amendment of the Mines Inspection Act was discussed, and by no means approved. The necessity for additional Inspectors was strongly insisted upon.

At the Wolverhampton Police Court, on Wednesday, Mr. Spooner, stipendiary magistrate, fined Henry Carter, chartermaster and landlord of a public-house, 5*l.* and costs for paying a workman 4*l.* 6s. 6d. due to him as wages on the flags at the entrance of the house, instead of at the pit's mouth.

THE TIPTON MINES DRAINAGE SCHEME.—A meeting was held at the Hen and Chickens Hotel, Birmingham, on Thursday, which terminated in a compact being formed which will provide for the cost of pumping, at Messrs. Dixon and Company's new engines, for the next three years certain, at the cost of 1200*l.* per annum, and may possibly extend beyond that period a sufficient time to exhause the minerals in the basin. We congratulate the district upon so speedy a settlement of what at one time appeared to peril the best interests of that portion of the Black Country, and hope the same mode of dealing with the water may be carried to other parts of the district where the mines are drowned out.—*Birmingham Daily Post.*

REPORT FROM MONMOUTH AND SOUTH WALES.

MAY 20.—The holidays usually held at Whitsuntide have somewhat interfered with operations at the various iron-making establishments, but it is satisfactory to find that the prospects of the rail branch of the trade are, if anything, more cheering, the market continuing in a healthy state, the demand steadily increasing, and prices tending in makers' favour. Reference has been previously made to the large number of rail buyers in the market anxious to enter into engagements, one contract offered being for 4000 tons, which has been taken by one of the firms in this district, but the report forwarded us does not state whether it has been taken at an advance or present current quotations, although it is believed that conditions and terms are in favour of the maker. There is an inclination on the part of several buyers to purchase largely at current quotations, owing to the probability of an advance taking place before the expiration of June; but to such customers makers are evincing increased shyness, as the engagements on hand will keep them fairly employed up to the close of the Baltic navigation season. The home trade continues quiet, although there is a better feeling manifested, and a tendency to improvement. There are more enquiries for plates, consequent upon the improvement which has set in in the iron shipbuilding trade. Something like activity is being evinced in the shipment of rails to the United States, Russia, and several of the continental markets; and although no less than 50,586 tons were cleared last month from the local ports, the exports this month will be much larger if the vessels expected arrive, and no unfavourable weather sets in to check their departure. Although nothing further has transpired with regard to the Alabama claims, advices from the United States continue favourable, and the public feeling upon the matter is becoming more quieted, more especially so after the remarks made by Mr. Reverdy Johnson, the American Minister, who states that he shall return to his home with the assurance that the amicable relations between the two nations are not to be seriously disturbed. Strong hopes are entertained that such will prove to be the case, for if war were to take place between the two countries this district would suffer to a very considerable extent, American buyers of iron being the principal customers. The failure of Messrs. Schepeler and Co., merchants, New York, who have purchased considerable quantities of rails in this district, will not materially affect the makers who have supplied them, although it may tend to check shipments for the next two or three weeks. The demand for pig-iron is limited, but stocks in makers' hands are known to be low. Tin-plate makers are tolerably well placed for orders, chiefly for coke qualities for the American markets and British colonies.

There is a little more activity evinced in the Steam Coal Trade, the demand having slightly increased from the mail packet stations and some of the Mediterranean ports. The wind, however, has been unfavourable during several days for vessels to arrive at the local ports, and at present there is a scarcity of vessels, especially of large tonnage, suitable for the more distant ports. A fair average quantity is being sent to the French markets, buyers for which continue to rank foremost among the customers for South Wales steam coal. With South America there is but little business being transacted, and to the other foreign and continental markets the clearances are below the average. The House Coal Trade is in far from a satisfactory position, the purchases of West of England and Irish house being smaller than usual at this period.

There has been a gradual increase in the amount of coal raised in the Aberdare district during the past five years, as will be seen from the following figures:—In the five parishes of Aberdare, Merthyr, Gellygaer, Ystradyfodneg, and Llanwonno, there was produced of steam coal for sale in 1863, 2,370,649 tons; 1864, 2,390,306 tons; 1865, 2,449,123 tons; 1666, 2,822,683 tons; 1867, 2,904,466 tons. Bituminous coal raised for sale in the same parishes in 1863, 518,052 tons; 1864, 703,634 tons; 1865, 1,193,270 tons; 1866, 1,297,100 tons; 1867, 1,369,460 tons. Bituminous and steam coal produced for the purpose of consumption in the manufacture of iron in 1863, 1,125,721 tons; 1864, 1,089,537 tons; 1865, 1,056,044 tons; 1866, 1,012,313 tons; 1867, 981,350 tons.

An effort will be made next session of Parliament to bring to a practical issue the important question of shortening the railway distance between South Wales and London. Between the dock at Lydney and the intended new basin of the Gloucester Canal, at Berkeley Hill, it is intended to construct a subway, by sinking in the bed of the Severn an iron tube, and to connect the mouth thereof with the railway running east, to a junction with the Midland and Great Western at Stonehouse, and the railway running west, connecting the subway with the Midland at Thornbury, the South Wales Union at Pilning, and the Bristol Port and Pier at Avonmouth. By means of the eastern branch the distance, it is stated, from South Wales to London will be shortened by 17 miles, and by the western fork South Wales coals will find new markets both at Gloucester basin and Bristol Docks. If the tunnel scheme can be carried out ships trading to Sharpness might easily obtain cargoes of coal there, instead of going in ballast to Newport and Cardiff.

The new furnace put in blast at the Gadlys Works at the beginning of the year was again blown out on Saturday and Sunday, owing to some defect in the construction, causing a heavy loss to the company.

Reference was made in last week's report to the letting of different departments at the extensive works at Cwmavon to contractors, but the new system does not seem to be taken very well by the workmen in general, but hopes are entertained of masters and workmen using sufficient wisdom and mutual feeling to prevent a strike, the effects of the strike several years ago being still felt in many a home at the present time.

The arrivals at Swansea include—The St. Conivan, from Bilboa, with 99 tons of iron ore, for Tucker and Co; Jeune Colombe, from Cherbourg, with 110 tons of iron ore, for W. R. Crawshay; T.V.G., from St. Malo, with 100 tons of blende ore, for Dillwyn and Co.; Valentine, from Requejada, with 155 tons of zinc ore, for Dillwyn and Co.; Planet, from Drammen, with 210 tons of nickle ore, for H. H. Vivian; Agnes, from Antwerp, with 215 tons of iron, for Doran and Angel; Jacob Syms, from Bilboa, with 100 tons of iron ore, for W. Tremellen.

EXPORTS OF WELSH IRON.—The anticipations that were entertained, some five or six months ago, of an improvement taking place in the iron trade, are being gradually realised in South Wales, and the works, more especially the rail-mills, are better employed than has been the case since the great panic of 1866. The exports from Cardiff in the first four months of this year were as annexed:—January, 9851 tons; February, 23,747 tons; March, 19,399 tons; and April, 26,785 tons: making a total of 79,782 tons, as compared with 46,209 tons in the first four months of 1868. From Newport the exports in January were 9777 tons; February, 8456 tons; March, 22,409 tons; and April, 21,329 tons: making a total of 61,971 tons, as against 36,173 tons in the corresponding period of last year. The progress here shown indicates a substantial advance towards prosperity, and there is every probability that the remaining months of the year will show an equally satisfactory increase, for there are at present from 80,000 to 90,000 tons at the two ports awaiting shipment, and which will be dispatched to the various markets as soon as the requisite tonnage can be secured.

GUN-COTTON.—Reports relative to the application of gun-cotton to mining and quarrying operations have been published in a parliamentary paper prepared at the War Office, pursuant to a motion of Mr. Wentworth Beaumont. The committee appointed to investigate this matter made a series of experiments in 1864 and 1865 respecting the blasting power of gun-cotton, and reported that its employment would be advantageous, either in the compressed or granular form, for quarrying, mining, and general engineering purposes.

MINERS' ASSOCIATIONS IN PRUSSIA.—An association, the working of which has proved most beneficial in promoting the general interests of the trade and industry of the district—the Association for the Protection of the Mining Interests in the Dortmund Oberbergamt District—has for some time past been steadily rising in utility and public estimation; and we have now been favoured by Mr. THOS. J. MULVANY (the manager of the Prussian Mining and Iron Works Company) with an interesting account of the proceedings of the tenth ordinary general assembly, recently held under the presidency of Dr. HAMMACHER. It will be of interest to the readers of the Journal to see how this association works, and in the opening address of the Chairman a large amount of valuable information is given with reference to the progress of the Westphalian coal industry during the last ten years. Under the auspices of the association a complete chemical laboratory is about to be established in the centre of the coal district at Bochum, in referring to which Dr. SCHULTZ observed that there would be an experimental boiler and all necessary appliances for fully testing the coals from the various collieries and seams—as to their chemical constituents, heating power, specific gravity, &c., with a view to the judicious selection of the sorts best suited for export, gas manufacture, the generation of steam, and various other purposes. Among the advantages which the association has secured to its members the obtaining of reforms in the laws affecting the mining interest may be mentioned as one of the most important. The constitution and objects of the association appear to differ from those of the mining associations in England, as it is practically a sort of "Chamber of Commerce" specially for the mining interests, and is now fully recognised by the Government as an authorised representative of those interests. There are besides, and quite separate and distinct from it, various professional and scientific associations of the Mining as well as the Mechanical and Civil Engineers. The statistical and other very valuable information brought forward at the meeting will be more fully referred to in next week's Journal.

COAL MINING IN RUSSIA.—An effort is about ~~is about~~ to be made to extend the coal mining industry of Russia by seeking English capital for the development of the Zavidova Coal Mines, belonging to the Princess Catherine Kudashaff, and situated in the Government of Ekaterinoslav, district of Bakhmoot, and station of Petropaulovka. These coal mines are situated about 35 versts from the Kharkoff and Taganrog; and Prof. Borissack, in his Geological Journal for 1867, thus refers to them:—On the right bank of the River Byck, in the district of Bakhmoot, lies the estate of the Princess Kudashaff, at the distance of half a verst (about ½ of an English mile) from the village of Zavidova, a seam of coal has been discovered about 5¼ spans thick, its direction being north-west 24° and the dip 45°. The open side of the river's shore shows the following section:—Marsh, ¾ arsheen; white clay sand, 3 sagens; yellow clay-sand, 5 arsheen; ditto, with quartz pebbles, ½ arsheen; dark-grey stratified clay, 1½ arsheen; and coal, 5¼ spans, below which is a mass of grey stratified clay. The Zavidova coal deposits are about 90 versts from Bakhmoot, and the same from Paulograd and Izume (all three capitals of districts), Prof. Beckstoff, of the Kharkoff University, made a chemical analysis of the coal, and found it to contain—carbon, 64·5; ash, 2·0; pitch, 9·5; water, 8·0; gas, 15·5 =99·5. As much as 200 cubic feet of gas has been extracted from 1 pood of coal by dry distillation in the laboratory; but it is estimated that in practice and on a large scale (when the coal does not heat so quickly, and the quantity of pitch produced is consequently greater) only 110 ft. could be relied upon. This is the quantity produced in England by common kinds of coal used for gas-manufacturing purposes. The coke is agglomerating, and of shining aspect, and the coal contains no pyrites, although traces of sulphur are detected upon careful analysis; the quantity of ash (2 per cent.) is also insignificant, but very few kinds of coal containing so little. Speaking generally, the experiments have proved that proved that the Zavidova coal belongs to a very good kind of flaming coal, and resembles that of Newcastle. As the coal contains a large proportion of carbon it would be well adapted for domestic and general purposes, and an equal weight would give twice the heat of the wood generally used in the district.

THE STATE OF MEXICO.—A correspondent, "H. J. F.," writes—"To judge from the extract given in the City Article of the Times of Wednesday of the report issued by the Mexican Bondholders' Committee, that report cannot fail to give satisfaction to the interested parties. I am happy to add that, from private information, just come to hand, the question of the payment by the Mexican Republic of her debts will shortly be brought before Congress by an influential member of that body, and there is good reason to expect, not only that the subject will be entertained with a seriousness befitting its importance, but that some plan with regard to the reduction and ultimate extinction of the debt will be devised. Happily, the last reports from Mexico are such as to encourage these hopes, inasmuch as the first step towards good government—a return to public peace and quietness—has been made. However deplorable the late disturbances which retarded the complete pacification of the Republic were, they have, at all events, afforded an incontrovertible proof of the desire for public order having taken firm root, and of the entire country deprecating everything which menaces to bring back the disastrous era of military seditions, *pronunciamientos*, and ephemeral Governments. Public attention is more and more concentrated on the measures taken by the Government for developing the natural resources of the country, and for improving the means of internal communication. With this view the exportation of ores, ironstone, &c., has been allowed duty free, and the carriage by rail thereof to the ports of embarkation fixed at 65 per cent. less than that of other freight. This measure has already induced several commercial houses to send agents to the mines, for the purpose of buying large quantities of metal for export; it will also cause to be exported a great deal of metal which hitherto has been left to waste for want of the means necessary for refining it. In the mining district of Bacubilito, near Sinaloa de Zaragoza, gold deposits have been discovered, which, according to all accounts, bid fair to become of vast importance; so far the miners who repaired to the "placer" have, on an average, collected daily about 10 ounces of pure gold each, and on February 4 a nugget was found of the value of about $1000. The arrival in the Mexican territory of Messrs. Gibbs and Crawley gives rise to to the just expectation that the works of the railway from Vera Cruz to the city will be proceeded with energetically. The line from Apizaco to Puebla, which will complete that part of the railway between Puebla and the city, is fully expected to be ready for traffic by the time stipulated in the contract with Government—i.e., on Dec. 31 next. The party antagonistic to the Government of Juarez and of his present ministers having, for some time past, lost no opportunity for representing the financial position of the country as in such a state as to render national bankruptcy imminent, it is satisfactory to find that, so far, all public functionaries have had their salaries paid punctually, in spite of the great and unforeseen expenses caused by the rebellion in Puebla and of the falling off in the revenue consequent upon diminished imports and languishing trade. This happy result has been obtained without recourse having been had to any transactions onerous to the public treasury, and without the imposition of new taxes. A Consulate-General of the North German Confederation will

shortly be established in the city. This post is to be occupied by Herr Hurt Von Schlozer, late secretary of the German Legation in Rome, whose arrival was daily expected. This nomination has been made by Count Bismark with the view of facilitating the conclusion of a commercial treaty between that confederation and the Mexican Republic."

PRINCESS OF WALES.—During the past fortnight this mine has been thoroughly inspected by Capts. Rodda and Collom, of Okel Tor, and the subjoined are their reports upon it :—

John Rodda, May 17 : Harris's engine-shaft is in regular course of sinking by a full pare of men in a highly mineralised channel of ground, and is now down about 30 fms. from surface, and at the 20 a cross-cut is extended north altogether about 12 fathoms ; the first 4 fathoms driven is through killas of the best possible character for producing mineral, and such as is found in the most productive mines of the district ; then a very fine champion lode, with a moderate underlie south of 18 in. in a fathom, is passed through, 7 feet wide, consisting principally of splendid gossan, containing a little black ore, quartz, capel, prian, peach, &c., which are the usual characteristics of a profitable ore-bearing lode ; the remaining 7 fms., or thereabouts, is through the same sort of strata as described above, and in the present end they have just intersected what is termed Vosper's lode, but as it is not cut through I am unable to give you its general character ; I may say, however, that as far as cut into (18 in.) it looks very kindly indeed, consisting of quartz, gossan, prian, &c. On this (Vosper's) lode an adit has been driven from about the eastern boundary of the sett, some 18 fathoms west, and for the whole drivage the lode produced a little, and sometimes good stones of ore, and looks exceedingly promising, especially so shallow, for there are 70 fms. between the present adit end and the shaft, and the adit if driven home to the shaft would be only 20 fathoms deep. Harris's engine-shaft will soon be down 35 fms. deep where according to calculation it will take the first lode referred to, and at [illegible] level you will only have about 7 fathoms of cross-cut to drive to intersect Vosper's lode ; the appearance of these lodes at the 20 and adit warrant the most sanguine in saying that there is a great probability of meeting with a good productive lode at the 35, and even if this is not the case, I am convinced that you have only to go a little deeper to reap a rich reward, because lodes presenting such indications as those do, and backed as they are by beautiful gossan, scarcely ever fail to produce large quantities of copper, and to turn out profitably productive. You have a good, powerful steam-engine erected on the mine, a good shaft going down, and pitwork sufficiently large for the water you are likely to have in the mine. The situation of the sett is excellent, being on the southern slope and within a very short distance of the Kithill range of granite. North and north-east, on parallel lodes, are the Kelly Bray Mines, now making good profits. Kithill Mine and Hingston Down Consols, which have made good profits east, are on the same lodes ; and adjoining are the Prince of Wales and West Prince of Wales Mines, with a good bunch of ore in the former coming west at the 65. Immediately west, and also on the same lodes, is Wheal Mary Florence, a very promising mine, with a lode in a level driving east towards your sett worth, as stated by the agent, 2 tons of good ore per fathom. Seeing, then, that those lodes are productive for a long distance, and taking into consideration the good position of your sett, with the other favourable features connected therewith, my impression is that you have only to prosecute your mine with spirit and good success will follow. The south lodes passing through your extensive sett are those of Silver Valley, Wheal Brothers, and Harrowbarrow Mines, which were formerly worked for tin and silver, and produced many thousands of pounds worth of these minerals, and if the same lodes are developed to a moderate extent, my opinion is they will well repay for the outlay.

W. B. Collom, May 13 : Having to-day inspected this mine, I beg to hand you my report thereon. The engine-shaft I find is sunk from the surface nearly 30 fathoms deep, and is gone down in a very congenial stratum of clay-slate, most favourable for lodes proving productive in copper ore. At 20 fathoms from surface a cross-cut is driven north about 5 fathoms, and a large lode intersected, composed of a rich looking gossan, about 2 ft. wide, friable quartz, prian, and capel, with traces of copper ore, and underlying a little south and towards the engine-shaft ; this lode is over 6 ft. wide. The character of the gossan is very similar to the gossan I have seen in Kelly Bray (to the west of you) over the course of ore discovered in that mine. The 20 is extended north of the gossan lode 6 fathoms, and the north, or Vosper's lode intersected ; this lode not having been cut through I cannot report fully on it ; the underlie of this lode is south, the same as the gossan lode, but faster, consequently in depth it forms a junction with that lode. In the adit level, 100 fathoms east of the engine-shaft, both these lodes are intersected, and the north one driven on west about 18 fathoms ; it will average 3 ft. wide throughout this drivage, with an underlie south of 2½ ft. in a fathom, being composed principally of peach and quartz, with black and yellow copper ore ; the old miners have worked extensively on the backs of this lode for tin further west. The gossan lode is a little south of Vosper's lode in the adit level, where it is driven through, and is from 6 to 7 ft. wide, a very kindly lode of gossan and quartz. The gossan lode will, I believe, be found the main productive one, and from its general character I am satisfied depth only is required to find larger deposits of copper ore under such a rich looking gossan. The north lode in depth will be a feeder to the south or gossan lode when these two form a junction. The necessary machinery is erected for draining the mine to a considerable depth, and I am glad to see you pushing down the engine-shaft with all speed, as I am certain, taking into consideration the character of the lodes and the channel of ground they run in, which contain all the elements of success, depth only is required to lay open a rich and valuable mine.

HOLLOWAY'S PILLS—THE LIVER, THE STOMACH, AND THEIR AILMENTS.—Alternations of temperature, muggy weather, a troubled mind, sedentary habits, excesses of the table, and a gay, reckless mode of life exert the most deleterious influence over the liver and stomach. When once these organs are fairly out of order, great inroads are quickly made on the general state of the health. The constitution, which has been deprived of two of its noblest organs, soon gives way, and diseases quickly follow, from which, if neglected, the worst consequences will inevitably result. If a course of Holloway's celebrated pills be persevered in, all will be well again, as they are the finest and best correctives of the blood ever known, and a certain cure for all disorders of the liver and stomach.

RAILWAY WAGON WORKS, BARNSLEY.

MESSRS. G. W. AND T. CRAIK
ARE PREPARED TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by deferred payments through wagon-leasing companies.

WAGONS PROMPTLY REPAIRED.

TANK LOCOMOTIVES,

FOR SALE OR HIRE.

HENRY HUGHES AND CO.,
LOUGHBOROUGH.

NOTICE.—THE BRITISH, COLONIAL, AND FOREIGN PATENT GOLD AND SILVER AMALGAMATING AND WASHING MACHINE COMPANY inform the public interested in mining that, it having been RUMOURED that their PATENT AMALGAMATOR is an INFRINGEMENT of an EXISTING PATENT, and that an INJUNCTION has been SERVED upon them in consequence, the SAME being UTTERLY FALSE, they HEREBY GIVE NOTICE that they HAVE MADE, ARE MAKING, and WILL CONTINUE TO MAKE THEIR MACHINES, and PARTIES PROVED to CIRCULATE such UNFOUNDED RUMOURS will be PROCEEDED AGAINST WITH THE UTMOST RIGOUR OF THE LAW.

H. C. HOUSE, Secretary.

IMPORTANT NOTICE.

TO GOLD AND SILVER MINING COMPANIES.

THE BRITISH, COLONIAL, AND FOREIGN PATENT GOLD AND SILVER AMALGAMATING AND WASHING MACHINE COMPANY
(UNDER "RICKARD AND PAUL'S PATENT")
Are prepared to EXECUTE IMMEDIATE ORDERS for the AMALGAMATING MACHINE in fourteen days from receipt of order.

Applications for prices, prospectuses, &c., to be made to the Secretary,
MR. H. C. HOUSE,
1 and 2, GREAT WINCHESTER BUILDINGS, LONDON, E.C.

NOTICE.—THE BRITISH, COLONIAL, AND FOREIGN PATENT GOLD AND SILVER AMALGAMATING AND WASHING MACHINE COMPANY inform the public interested in mining that, it having been RUMOURED that their PATENT AMALGAMATOR is an INFRINGEMENT of an EXISTING PATENT, and that an INJUNCTION has been SERVED upon them in consequence, the SAME being UTTERLY FALSE, they HEREBY GIVE NOTICE that they HAVE MADE, ARE MAKING, and WILL CONTINUE TO MAKE THEIR MACHINES, and PARTIES PROVED to CIRCULATE such UNFOUNDED RUMOURS will be PROCEEDED AGAINST WITH THE UTMOST RIGOUR OF THE LAW.

H. C. HOUSE, Secretary.

COLLINGE'S PATENT SPONGE CLOTHS,

FOR CLEANING STEAM ENGINES, EVERY DESCRIPTION OF MACHINERY, LAMPS, WINDOWS, &c., &c.

Being a woven fabric, they are easily washed, say 20 times, consequently do not cost one-fourth the price of cleaning waste.

TRADE ALLOWANCE MADE TO DEALERS, FACTORS, AND AGENTS.

Samples and prices upon application to—
DANIEL COLLINGE AND SON,
1, PEEL STREET, MANCHESTER.

IMPORTANT TO ENGINEERS, FOUNDERS, AND FAMILIES.

PULVERISED MAGNETIC ORE,

For CLEANING and POLISHING STEAM ENGINES, BRASS, STEEL, and COPPER, and other purposes. Also as KNIFE POWDER.

Price ..... £5 per ton.

Quantities of not less than 1 ton will be delivered at the Dolgelly Railway Stations, and to be had at the Mill, Upper Smithfield-street, Dolgelly, or of the principal agents of the owner. THOMAS SCOTT, Manager.

WORKS,—UPPER SMITHFIELD STREET, DOLGELLY, NORTH WALES.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

IN the MATTER of the COMPANIES ACTS, 1262 and 1867, and of the EAST WHEAL RUSSELL MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the ABOVE NAMED COMPANY by the Court was, on the 15th day of May instant, presented to the Vice-Warden of the Stannaries by Henry Hussey Vivian, William Graham Vivian, Arthur Pendarves Vivian, W. Glynn Vivian, Octavious Williams, and Edward Budd, carrying on business at Calstock Quay as General Merchants, creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at No. 18, Thurloe-square, Brompton, London, on Thursday, the 27th day of May instant, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 23d day of May instant, and notice thereof must at the same time be given to the petitioners, their solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall
(Petitioners' Solicitors).
GREGORY, ROWCLIFFES', AND RAWLE, 1, Bedford-row, London
(Agents of the said Solicitors).
Dated Truro, 15th May, 1869.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN RE PHŒNIX MINE.

TO BE SOLD, pursuant to an Order made in a Cause West and Another *v.* Bigge and Others, dated the 15th day of February, 1669, BY PUBLIC AUCTION, at the Registrar's Office, Truro, on Wednesday, the 2d day of June next, at Twelve o'clock at noon,

100 (500th) PARTS or SHARES of the defendants, Matthew R. Bigge and George Holyoak ; and
80 (500th) PARTS or SHARES of the defendant, George Holyoak,
Of and in the said MINE.

HODGE, HOCKIN, AND MARRACK, Plaintiff's Solicitors, Truro.
Dated Registrar's Office, Truro, May 19th, 1869.

THE CARYSFORT MINING COMPANY
IN LIQUIDATION.

TO BE SOLD, BY AUCTION, in the Public Rooms, 9, Upper Ormond Quay, Dublin, at the hour of One o'clock, P.M., on May 29, 1869,

THE CARYSFORT MINES,

Comprising COPPER, SULPHUR, IRON, LEAD, and SILVER-LEAD ORE and extending under an area of 16,500 acres, in the county of WICKLOW IRELAND, together with the PLANT, MACHINERY, &c., now on the Mines.

Further particulars, and conditions of sale, may be obtained at the offices of Messrs. D. and T. FITZGERALD (Solicitors to Liquidator), 20, St. Andrew-street, Dublin.
And of— W. G. CRAIG, Esq. (Liquidator), Trinity-chambers, Dublin.
JOHN LITTLEDALE and Co., Auctioneers, 9, Upper Ormond Quay, Dublin.

THE BLACK CRAIG CONSOLIDATED MINING COMPANY
(LIMITED). *IN LIQUIDATION.*

TO BE SOLD, BY AUCTION, at Garraway's Coffee House, Change-alley, Cornhill, in the City of London, at the hour of One o'clock in the afternoon precisely of Tuesday, the 1st of June, 1869, the LEASE, MACHINERY, and EFFECTS of the BLACK CRAIG CONSOLIDATED MINES, situate in the Parish of Minigaff, near Newton Stewart, Scotland.

Further particulars and conditions of sale may be obtained at the offices of—
Mr. HENRY TYRRELL, 14, Gray's Inn-square, London,
(Solicitor to the Liquidator) ;
Mr. T. P. SCRIVENER, (Liquidator), 40, Norfolk-street, Strand ; and of
Mr. FREDK. INMAN SHARP, auctioneer, 16, Abchurch-lane, London.

RINGMORE, NEAR TEIGNMOUTH, DEVON.

MR. JOHN ADAMS WILL SELL, BY AUCTION, at Norsworthy's London Hotel, Teignmouth, on Monday, the 31st of May, 1869, at Three o'clock in the afternoon (unless previously disposed of by private contract, and subject to such conditions as shall be then and there produced, and either in one or the following lots, as may be determined on at the time of sale), the undermentioned

VALUABLE FREEHOLD PROPERTY.

LOT 1.—All that commodious and pleasantly situated DWELLING HOUSE, with the GARDENS, greenhouse, two-stall stable, and offices adjoining, situate at Ringmore aforesaid, and now in the occupation of Mr. John Bowden, containing about 1A. 0R. 0P.

LOT 2.—All those two valuable CLOSES of LAND, called Higher and Lower Yellowberries, situate in the parishes of St. Nicholas and Stokeinteignhead, Devon, containing about 4A. 2R. 31P.

LOT 3.—All those two rich and desirable PASTURE FIELDS, called Higher and Lower Rushlands, situate at Ringmore aforesaid, and containing about 2A. 3R. 8P. (Lots 2 and 3 are now in the occupation of Mr. Charles Conlam, as a yearly tenant.)

This very desirable and valuable property is situate on the banks of the River Teign, about one and a half miles from Teignmouth, commanding very extensive views of the sea and river, the fashionable town of Teignmouth, and the picturesque and wooded scenery of this much admired neighbourhood.

COPPER and SILVER ORE are found to exist on the property.

For viewing, apply to the tenants, and further particulars may be obtained of Mr. JOHN ADAMS, Surveyor, Newton Abbot ; or of Mr. W. WINTERBOTHAM, Solicitor and Town Clerk, Tewkesbury.

PRELIMINARY ANNOUNCEMENT.
GLAMORGANSHIRE.
IMPORTANT SALE OF MINERAL PROPERTY.

MR. JOHN M. LEEDER has pleasure to announce that he has received instructions to offer FOR SALE, BY PUBLIC AUCTION, at the Mackworth Arms Hotel, Swansea, on Wednesday, the 16th day of June next, at Three o'clock precisely, unless previously disposed of by Private Contract, of which due notice will be given, the very VALUABLE IRONSTONE WORKS, with COLLIERIES, known as the

PENRHIW AND GLYNBONT WORKS,

In the VALE OF NEATH, at and near the Glyn-Neath Railway Station.

Large quantities of ironstone have been raised at these works, and there is a stock on bank at present of 10,000 tons. The quality is of the best in South Wales, and there is a capacity for a great output of ironstone at a low cost, and sufficient to yield a supply for several blast-furnaces for the remainders of the terms, which are now about 45 years.

There are several million tons of coal and fire-clay unwrought in the property. A pit has been sunk 37 yards deep, proving a seam of coal 7 feet 4 in. thick, quality hard, and roof strong.

Full particulars, with reports by Messrs. Bedlington and Adams, will be immediately published. In the meantime it may be stated that the leases contain full powers for the establishment of iron works, blast-furnaces, rolling-mills, &c. The situation is well adapted for such purposes, the communication being so convenient by railway and canal to the various ports of Swansea, Britonferry, and Neath, and by railway (broad and narrow gauge) in all directions.

The position and the facilities of transit make the property, whether regarded as a source for a large supply of the best argillaceous ironstone to existing works, as a colliery, or as a site for the erection of iron or steel works, most deserving the attention of ironmasters and capitalists.

Full particulars, with conditions of sale, will shortly be issued, and may be obtained of the auctioneer, at his offices, Oxford Chambers, Oxford-street, Swansea ; of BENJ. MATTHEWS, Esq., Solicitor, Cardiff ; of J. W. RUSSELL, Esq., Solicitor, Merthyr-Tydfil ; of D. JOSEPH, Esq., Ely Rise, near Cardiff ; and of Messrs. UPTON, JOHNSON, and UPTON, Solicitor, 20, Austinfriars, London.

LEICESTERSHIRE—FREEHOLD FARM AND COAL FIELD.

MESSRS. CLEAR AND CHEFFINS are instructed by the Trustees for sale to SELL BY AUCTION, on Thursday, July 1st, 1869, at the Bell Hotel, Leicester, at Three for Four o'clock, all that VALUABLE FREEHOLD PROPERTY, known as

IBSTOCK LODGE FARM,

Containing 152 acres, or thereabouts, of highly-productive ARABLE and PASTURE LAND, with FARM-HOUSE and suitable AGRICULTURAL BUILDINGS thereon, most advantageously situate in the parish of Ibstock, within a short distance of the Bagworth Railway station, and about 13 miles from the important and rapidly increasing town of Leicester.

Lying as it does in the immediate vicinity of the Ibstock Colliery, from which the best coal in Leicestershire is obtained, and also closely abutting on the coal fields of the Nailstone and Bagworth Collieries, it is beyond a doubt that the coal field from which these several collieries are supplied underlies the whole of this estate.

The following is an extract from the opinion of HENRY WAUGH, Esq., C.E., F.G.S., upon the underlying seams of coal in the Ibstock Lodge Farm :—

"Ibstock Lodge Farm, lying due east of Ibstock Colliery, is undoubtedly underlaid by the two great worked seams of this district—viz., the Main Coal of Coleorton and the Lower Main Coal of Ibstock, Bagworth and Nailstone Collieries. The dip of the coal measures is 5° east, without apparently any fault between the mines named. The two seams, 'Upper Main Coal' and 'Lower Main Coal,' are very valuable, the Lower is the favourite house coal of Leicestershire. In the opinion of some of the most experienced coal managers, the beds of the 'Moira' Coal Field underlie these measures."

Possession of the farm may be had at Michaelmas, and particulars and conditions of sale, with lithographed plans, may shortly be obtained of Messrs. FREER and REEVE, solicitors, Leicester ; and of the auctioneers, Ethelburga House, 70 and 71, Bishopsgate-street Within, London, E.C.

RHENISH PRUSSIA.

SEVERAL VALUABLE MINES FOR SALE,—LEAD, COPPER, BLENDE, and IRON. The Mining Laws of Prussia give with the concession to work, an absolute right of property in the mine for ever, subject only to a royalty of 2 per cent.

Apply to Mr. YOUNGHUSBAND, 6½, Wilhelm Strasse, Bonn-on-the-Rhine.

TO BE SOLD, BY PRIVATE CONTRACT (now at work on the Mine),

THE SORTRIDGE CONSOLS ENGINES,

40 in. PUMPING, 22 in. ROTARY, with CRUSHER ; erected regardless of cost, in excellent order and condition.

Also, shortly will be SOLD, AT AUCTION, the whole of
THE MATERIALS ON THE MINE,
152 fms. of pitwork, &c. Full particulars will be announced.

Information in the meantime obtained of the Manager, Sortridge Consols, Horrabridge, South Devon.

PAR CONSOLS MINE.

FOR SALE, BY PRIVATE CONTRACT, at PAR CONSOLS MINE :—

ONE 80 in. cylinder PUMPING ENGINE, with THREE BOILERS, and balance bob, &c., complete.
ONE 72 in. cylinder PUMPING ENGINE (Bull), with TWO BOILERS, &c.
ONE 24 in. cylinder WINDING ENGINE, with BOILER, cage, &c.
ONE 26 in. ditto ditto, with TWO BOILERS, &c.
ONE 24 in. ditto ditto, with BOILER, cage, and steam capstan attached.
ONE 20 in. ditto ditto, with horizontal BOILERS, &c.
ONE 30 in. ditto ditto, with CRUSHER attached.
ONE 18 in. ditto ditto.
ONE 36 in. and 22 in. cylinder combined STAMPS ENGINE, with THREE BOILERS, iron axles, for 56 heads stamps, five tappets to the round.
TWO 14 ft. CALCINERS.

A large quantity of first-rate pumps, from 6 in. to 20 in., with windbores, matchings, H pieces, &c. ; 14 plunger poles, from 7 in. to 20 in., with stuffing boxes and glands to fit ; hammered and common iron rod plates, rod pins, staples and glands, rail iron and saddles, a quantity of pitch pine and other main rods (from 10 in. to 15 in.) ; 2 capstans and three shears, capstan rope, chains, and a variety of other articles ; several wood sheds, tin racks, &c.

For viewing the same, apply to the agents.

Further particulars may be had of Mr. WM. POLKINGHORNE, the purser, or of WM. WEST, Esq., C.E., Trecenham House, St. Blazey.

Par Consols Mine, Par Station, Cornwall.

TO BE SOLD, OR LET on MINING LEASE, a FREEHOLD ESTATE, containing THIRTY-TWO ACRES AND A-HALF, and situated in a populous MANUFACTURING and MINING DISTRICT, within half a mile of a railway station.

The mines and minerals consist of the Ten-Yard, Brooch, and Middle coals, Ironstone and Fire-clay.

The mines in the adjoining estates are being worked most successfully.

Apply to Messrs. HENDERSON and SALMON, Solicitors, Bristol.

TO CAPITALISTS, IRON MANUFACTURERS, AND MANUFACTURERS OF STEEL AND STEEL-IRON—BESSEMER, HEATON, AND OTHER PATENTEES.

MAY NOW BE HAD, BY PRIVATE TREATY, a most eligible OLD-ESTABLISHED IRON MANUFACTORY, a current-going concern, consisting of TWO BLAST FURNACES, supplied by a splendid BLOWING ENGINE, of ample power, suitable CALCINING FURNACES, COKE OVENS, and FIRE-BRICK WORKS. Also ROLLING MILLS, FORGES, FOUNDRY, FITTING and TOOL SHOPS, PATTERN SHOPS, &c.

These works are situated in the heart of the North of England mining district. Fuel can be had at first cost ; and the neighbourhood is the best market in the world for the sale of steel and steel-iron, now so much in demand by colliery owners and by iron shipbuilders.

A great area of ground is embraced by the establishment, upon parts of which new plant might be placed. There is a large extent of deep-water river frontage, giving the cheapest access to all markets.

This is a most favourable opportunity to capitalists who may be wishful to commence the new and lucrative business of making steel and steel-iron, by any of the recently patented processes. In this district such works must be profitable.

For further particulars, apply to Mr. THOMAS PRINGLE, Licensed Professional Valuer of Engineering Plant, &c., 7, Collingwood-street, Newcastle-upon-Tyne.

A VALUABLE SLATE QUARRY ON SALE.

A VALUABLE SLATE QUARRY TO BE DISPOSED OF, situate in the county of MERIONETH, NORTH WALES. The slates already produced are equal in quality to those of the celebrated (late) Lord Palmerston's quarry. The present proprietors would prefer retaining a considerable number of shares.

Apply to "A. B.," Post Office, Ebenezer, near Carnarvon, North Wales.

FOR SALE,—THE UNDERMENTIONED ENGINES AND WATER WHEELS :—

ONE 60 in. cylinder ENGINE, 10 ft. stroke in cylinder, and 9 ft. in shaft ; with TWO Cornish BOILERS, 10 tons each.
ONE 56 in. cylinder PUMPING ENGINE, 9½ ft. stroke, equal beam ; with TWO Cornish BOILERS.
ONE 50 in. cylinder PUMPING ENGINE ; with ONE BOILER.
ONE 25 in. cylinder (beam) double-acting ENGINE, 6 ft. stroke ; with ONE 10 ton BOILER.
ONE 12 in. cylinder rotary STEAM ENGINE, with ONE 6 ton BOILER.

The whole of the above engines are in excellent condition, some being nearly new.

WATER WHEELS.

ONE WATER WHEEL, 40 ft. diameter, and 8 ft. abreast.
ONE ditto 60 ft. ditto 3½ ft. abreast.

The above wheels have cast-iron rings, sockets, and axles.

Also, several Cornish CRUSHERS, of various sizes.

For further information respecting the above machinery, apply to W. MATHEWS, Engineer, Tavistock.
Tavistock, April 1, 1869.

GENERAL MINING COMPANY FOR IRELAND (LIMITED).

MAKERS OF ZINC OXIDE.

OFFICES,—29, WESTMORELAND STREET, DUBLIN.
MINES AND WORKS, SILVERMINES, COUNTY TIPPERARY.

The Directors beg to intimate to PAINT and COLOUR MAKERS, INDIA RUBBER MANUFACTURERS, SHIPPERS, and the TRADE generally, that they have COMPLETED the ERECTION of WORKS for the MANUFACTURE of ZINC OXIDE, and that they are now producing ZINC WHITE of GREAT EXCELLENCE and PURITY.

Samples and terms shall be forwarded on application.
29, Westmoreland-street, Dublin. EDMOND DE VINE, Secretary.

TO RAILWAY AND MINING ENGINEERS, CONTRACTORS, AND OTHERS.—MR. J. D. BRUNTON is now prepared to SUPPLY his

PATENT TUNNELLING AND SHAFT SINKING MACHINES,

By which the whole work of excavation is performed, rendering blasting unnecessary. It forms a circular tunnel or shaft of any required diameter, from 7 feet upwards. In Tunnelling, the debris produced is conveyed by mechanical means to the rear of the machine, and may be delivered into wagons without the aid of hand labour. In Shaft Sinking, the machine occupies less than a half of the area of the bottom, allowing room at all times for a man to remove debris. The rock is not reduced to fine powder, but only to chips of considerable, but necessarily varying, size. The machine acts without concussion. The end of the tunnel, or the bottom of the shaft, is at all times visible, and accessible for the removal of the loose pieces that are met with from time to time.

The cutting tools are easily and quickly changed.

For a tunnel or shaft of 7 feet diameter, a portable engine of 25-horse power is sufficient. The motion is conveyed by a wire-rope and Fowler's clip pulleys.

Rate of progress, four to ten times that attainable by hand labour.

Apply to— MR. J. D. BRUNTON,
No. 6, LEIGHTON CRESCENT, LONDON, N.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY (LIMITED),
MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION of RAILWAY ROLLING STOCK.
OFFICES AND WORKS,
HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.
LONDON OFFICE,—118, CANNON STREET, E.C.

RAILWAY CARRIAGE COMPANY (LIMITED
ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.
Passenger carriages and wagons built, either for cash or for payment over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

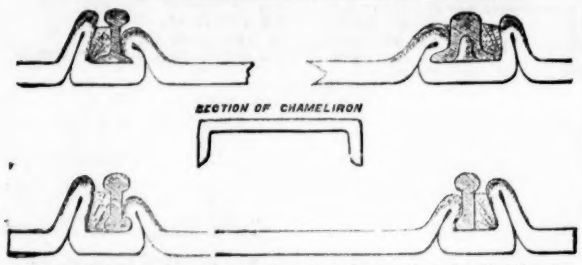
THE BIRMINGHAM WAGON COMPANY (LIMITED)
MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.
WAGON WORKS,—SMETHWICK, BIRMINGHAM.
*** Loans received on Debenture ; particulars on application.

WILLIAMS'S PERRAN FOUNDRY COMPANY,
PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.
London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

IMPORTANT TO COLLIERY OWNERS, AND THE PROPRIETORS OF IRONSTONE, LEAD, AND COPPER MINES, TRAMWAYS, &c.

THE PATENT WROUGHT-IRON SLEEPER,

Combining a SLEEPER and TWO CHAIRS IN ONE PIECE.



The SLEEPER can be made to suit any required section of rail, either double-headed, flat-bottomed, or bridge, and the channel section of iron, of which the sleeper is made, can be manufactured of various breadths, and of weights varying from 6 lbs. to 20 lbs. per yard.

Among the advantages of the WROUGHT-IRON SLEEPER are—

1.—The way can be laid more quickly, and with less manual labour.

2.—The channel section of the iron sleeper beds itself more firmly in the ballast, with the most rigid accuracy of guage.

3.—The continued re-laying of rotten or broken wooden sleepers is no longer required.

4.—The iron sleeper is cheaper in the long run than the wooden, which is proved by the fact that on the Continent, where the cost of wood is considerably less than in England, the iron sleepers are universally used.

5.—All the losses or damages arising from the ordinary system, from the way getting out of guage, chairs or sleepers breaking, chair fastenings becoming loose and injuring the horses' feet, are avoided.

For further particulars, apply to the Sole Licensees,—

GEORGE HOPPER AND SON,
BRITANNIA IRONWORKS,
FENCE HOUSES, DURHAM,
IRON FOUNDERS, ENGINEERS, & IRON MANUFACTURERS,
WAGON AND TRUCK BUILDERS,
MANUFACTURERS OF CAST AND WROUGHT-IRON WHEELS, SPOKES
BOLTS AND NUTS, BAR, ANGLE, AND TEE-IRON, RAILS,
IRON SCREENS, CAGES, AND COAL TUBS.
SMITH WORK AND FORGINGS OF EVERY DESCRIPTION.

ESTABLISHED MORE THAN HALF A CENTURY.

THE TAVISTOCK FOUNDRY, IRONWORKS AND HAMMER MILLS,

which have been carried on for more than half a century by
MESSRS. GILL AND CO.,
and obtained a
HIGH REPUTATION FOR
SHOVELS AND OTHER TOOLS
as well as for
ENGINEERING AND FOUNDRY WORK,
have been purchased by
MESSRS. NICHOLLS, MATHEWS, AND CO.,
BEDFORD IRONWORKS, TAVISTOCK.

For thirty years Messrs. NICHOLLS, MATHEWS, and Co., have been the proprietors of the latter works, but have now removed to the

TAVISTOCK FOUNDRY,

where, having the advantage of a never-failing stream of water of upwards of 200-horse power, they will have increased facilities for speedily and satisfactorily executing all orders entrusted to their care.

Manufacturers of STEAM ENGINES and BOILERS, on the newest principle: pump work, brass and iron; hammered iron shafts, of all sizes; miners' steel and iron tools.

N., M., AND Co. have had a LARGE EXPERIENCE in PREPARING MACHINERY for FOREIGN MINES, as well as selecting competent mechanics to erect the same.

N., M., AND Co. have always a LARGE STOCK of SECOND HAND MATERIALS.

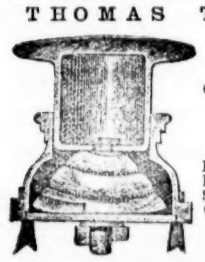
BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION, in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

THOMAS TURTON AND SONS,
MANUFACTURERS OF



CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.
CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.

DOUBLE SHEAR STEEL,	FILES MARKED
BLISTER STEEL,	T. TURTON
SPRING STEEL,	EDGE TOOLS MARKED
GERMAN STEEL,	WM. GREAVES & SON

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C.
Where the largest stock of steel, files, tools, &c., may be selected from.

HESLOP AND WILSON,
IRON, METAL, AND GENERAL MERCHANTS,
AND ENGINEERS,
40, DEAN STREET, NEWCASTLE-ON-TYNE.

EVERY DESCRIPTION of MACHINERY, ENGINEERS' TOOLS, &c. Portable and stationary ENGINES, MILLS, PUMPS, TURBINES, PATENT FANS, AGRICULTURAL MACHINERY, and IMPLEMENTS, STEEL TYRES, RAILS, &c.

COLLIERY STORES—Ropes, Spun Yarn, Waste, Leather, Shovels, Picks, Nails, Chain, Bar-iron and Plates, &c. Solid Cast-steel Sinkers' Hammers and Picks. Brass and Iron Tubes, Nuts, Bolts, Rivets, &c.

ESTIMATES, DESIGNS, TRACINGS.
Price-book on application.

Swan Rope Works.

GARNOCK BIBBY, AND CO.,
CHAPEL STREET, LIVERPOOL,
MANUFACTURERS of FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.

WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

MARTYN DENNIS AND CO., LIVERPOOL,
Sole agents for Cornwall.

ASSAY OFFICE AND LABORATORY,
No. 2, CROWN CHAMBERS, CROWN COURT,
THREADNEEDLE STREET,
CONDUCTED BY W. T. RICKARD, F.C.S., &c.
(Late MITCHELL and RICKARD).

Assays and analyses of every description of mineral and other substances manures, &c.

Gentlemen going abroad for mining purposes instructed in assaying, and the most improved methods of reducing gold, silver, and other metals.

MINING PROPERTIES INSPECTED AND REPORTED ON.

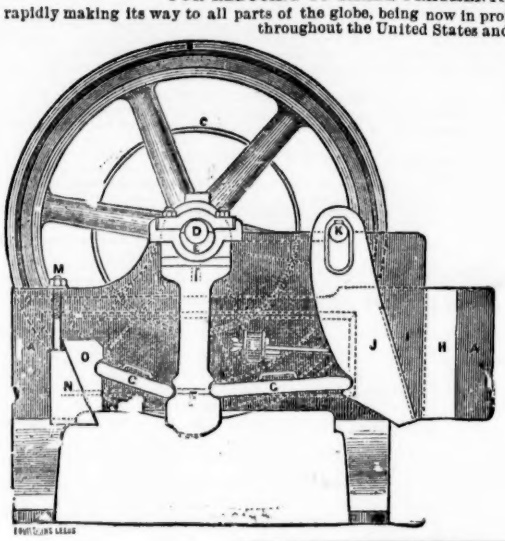
IMPORTANT TO CAPITALISTS AND INVESTORS.
Just published,
THE MINING QUARTERLY,
A QUARTERLY JOURNAL AND REVIEW OF MINING AND FINANCE.
Immediate application requested.
London: MANN BROTHERS, Cornhill. Price 4d., stamped 5d.

IMMENSE SAVING OF LABOUR.
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,
FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw s about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM H[illegible].

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON,
Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,
H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

MUSHET'S
TITANIC CAST STEEL,
FOR LATHE TOOLS, DRILLS, CHISELS, TAPS AND DIES, &c., &c.

MUSHET'S TITANIC BORER STEEL.

MUSHET'S WELDING CAST STEEL.

SOLID CAST STEEL HAMMERS AND SLEDGES.

SOLE MANUFACTURERS,
TITANIC STEEL AND IRON COMPANY, LIMITED,
COLEFORD, GLOUCESTERSHIRE.

LONDON: Enquiries may be addressed to Mr. HENRY MUSHET, LOMBARD EXCHANGE, LOMBARD STREET, E.C.
AGENTS FOR SCOTLAND: Messrs. JOHN DOWNIE and CO., 1, ROYAL BANK PLACE, GLASGOW.

HEATON'S PATENT.

THE LANGLEY MILL STEEL & IRONWORKS COMPANY
(LIMITED),
LANGLEY MILL, NEAR NOTTINGHAM,

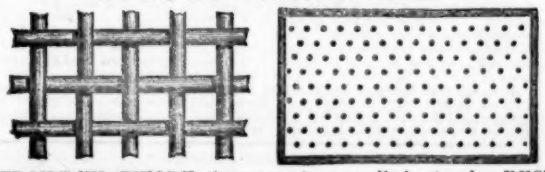
Are now making Cast-Steel suitable for Tools, Taps, Dies, Chisels, &c., &c., Shear Steel, and Iron of a very superior quality, by their direct process, under the superintendence of the Patentee.

The range of quality which this process secures renders the Steel and Iron suitable for almost every purpose to which these m[illegible] can be applied. Also, CAST-STEEL CASTINGS of all kinds from PATTERNS or DRAWINGS.

PATENT FLEXIBLE TUBING,
AND BRATTICE CLOTH FOR MINES
MANUFACTURED BY
ELLIS LEVER,
WEST GORTON WORKS, MANCHESTER.

FOR SALE, cheap, a 16-horse power PORTABLE STEAM ENGINE, new, and with all recent improvements, guaranteed.
FIRST-CLASS PORTABLES, 5 to 25-horse power, on advantageous terms. Prize Medals awarded—Hamburg, 1863; Paris, 1867, &c.
FOR SALE, EIGHT very superior SECONDHAND PORTABLE STEAM ENGINES, 5 to 10-horse power, by eminent makers, in excellent condition.
BARROWS AND STEWART, ENGINEERS, BANBURY

STRONG WIREWORK.



STRONG WIREWORK, the cross wires equally bent; also BEST STAMP GRATES, both of iron and copper, and punched copper plates; DITTO TUBD. All the above promptly supplied at
W. ESCOTT'S MINING MATERIAL DEPOT,
TAVISTOCK, DEVON.

JOHN AND EDWIN WRIGHT,
PATENTEES.
(ESTABLISHED 1770.)
MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED
PATENT FLAT AND ROUND WIRE ROPES
From the very best quality of charcoal iron and steel wire.
PATENT FLAT AND ROUND HEMP ROPES.
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.

UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.
CITY OFFICE No. 5, LEADENHALL STREET, LONDON, E.C.

THE NEWCASTLE CHRONICLE AND NORTHERN COUNTIES ADVERTISER. (ESTABLISHED 1764.)
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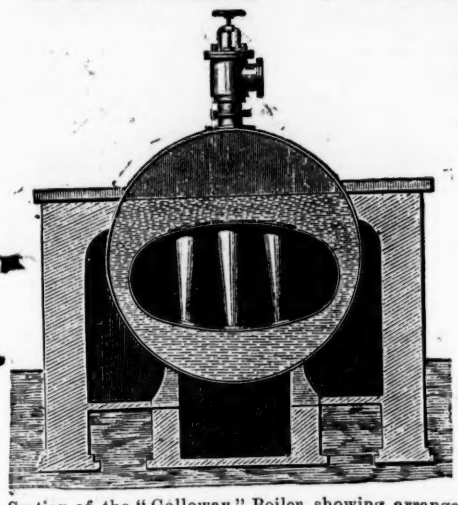
THE DAILY CHRONICLE AND NORTHERN COUNTIES ADVERTISER.
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

GALLOWAY'S
PATENT CONICAL WATER TUBES FOR STEAM BOILERS.



Section of the "Galloway" Boiler, showing arrangement of back flues, the furnaces being of the same construction as in the common two-flued boiler.

The above TUBES are made with such an amount of taper as will allow the bottom flange to pass through the hole in the upper side of the boiler flue, which renders their introduction into ordinary flued boilers a simple operation, and with the following advantages:—

The POWER of the BOILER is CONSIDERABLY INCREASED, and the FLUES ARE MATERIALLY STRENGTHENED.

The CIRCULATION of the WATER is MUCH IMPROVED, and UNEQUAL EXPANSION, with its attendant evils, PREVENTED.

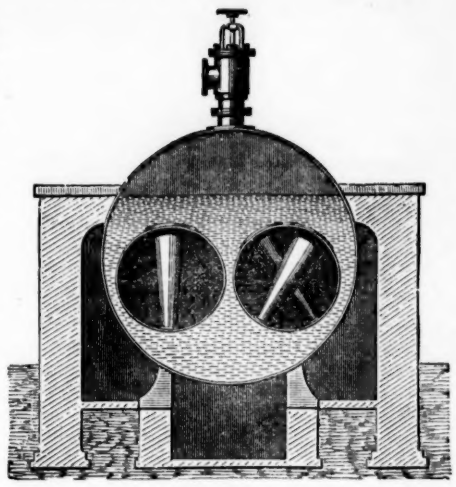
LIABILITY TO PRIME IS LESSENED.

These Tubes have now been in use upwards of fourteen years, and above 50,000 are in work in various parts of the country with the best results.

They can be fixed by any boiler maker, but can only be obtained from the Patentees,

W. & J. GALLOWAY & SONS,
ENGINEERS AND BOILER MAKERS,
MANCHESTER,
Makers of Wrought-iron Parallel Tubes, 40s. p. cwt.

MANUFACTURERS OF THE WELL-KNOWN



Section of Cornish Boiler, showing application of the "Galloway" Tubes.

"GALLOWAY BOILER,"
AS PER SKETCH ANNEXED.

UPWARDS OF TWO THOUSAND OF WHICH ARE NOW AT WORK.

BOILERS OF ANY DIMENSIONS, UPON THIS OR ANY OTHER PLAN, CAN BE DELIVERED WITHIN A FEW DAYS FROM RECEIPT OF ORDER.

STEAM ENGINES OF EVERY DESCRIPTION.
General Millwrighting.—Hydraulic Machinery.—Polishing, Grinding, and other Machines for Plate Glass.

LEAD ROLLING MILLS AND PIPE PRESSES. CAST AND WROUGHT-IRON GIRDER BRIDGES.

HALEY AND OTHER LIFTING JACKS, BOILER RIVETS, &c.—SCREW BOLTS, STEEL PUNCHING BEARS.

Shearing and Punching Machines, Bending Rolls, and every description of Boilermakers' Tools, &c., &c.

Fig. 86.

GWYNNE & CO.'S IMPROVED CHAIN-PUMP, *Worked direct by Steam-Engine.*

These pumps work without valves or packing, and raise a considerable quantity of water. They will lift sand, mud, or grit without choking, and require only very inexpensive repairs.

Fig. 84.

GWYNNE & CO.'S DOUBLE-ACTING PUMPING-ENGINE.

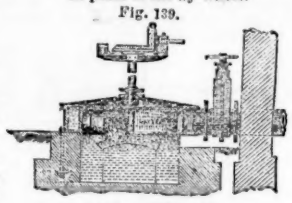
As supplied to the Admiralty Graving Docks, Malta, to lift from 200 to 2000 gallons per minute. The engine is of inverted vertical cylinder construction. The pump barrel and piston are of gun-metal, and the whole very strong and compact.

GWYNNE & CO.'S IMPROVED PLUNGER HAND PUMP.

A very neat and extremely compact arrangement; will work for years without getting out of order. These pumps are peculiarly adapted for mines, for which great numbers have been supplied in situations where no other pump could be applied for want of space. They are equally adapted for use as feed-pumps, by driving them with strap from a rigger in place of the fly-wheel.

Fig. 106.

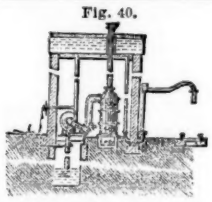
Fig. 139.



GWYNNE & CO.'S IMPROVED TURBINE WATER-WHEEL.

Compact, easy to erect, economical, simple, and perfectly adapted to all situations. Made of every power from 1 to 300 horse. These turbines are adapted for every class of work. Prices on receipt of particulars.

Fig. 40.



GWYNNE & CO.'S PATENT COMBINED STEAM-PUMP, *As Applied to Railway Stations.*

The vertical boiler supplies the engine with steam, the pump discharging the water lifted from the well into the tank above, whence it may be drawn as occasion requires, for feeding locomotives, washing the carriages, as a fire-engine, &c. Estimates given.

Fig. 142.

GWYNNE & CO.'S IMPROVED PORTABLE STEAM-ENGINE.

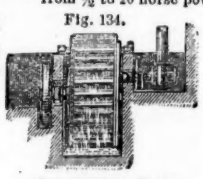
Light, simple in construction, durable, and economical, and very superior to "agricultural" engines. From 2½ to 30 horse power.

Fig. 42.

GWYNNE & CO.'S PATENTED WIND-POWER PUMPING MACHINERY. *Designed for Drainage and Irrigation Purposes*

Suitable also for supplying the mansions of noblemen or gentlemen. Works continuously day and night without attention. Made from ½ to 20 horse power.

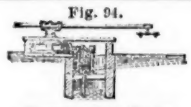
Fig. 134.



GWYNNE & CO.'S PATENT WATER POWER PUMPING MACHINERY.

Extremely useful wherever water-power is available. The centrifugal pump is worked by gear from the water-wheel. Suitable for supplying country mansions with water. No expense when once fitted. Made of all powers.

Fig. 94.



GWYNNE & CO.'S IMPROVED BULLOCK OR HORSE POWER PUMPING MACHINERY.

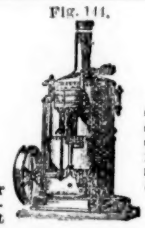
For situations where steam, water, or wind power are not available. Portable, easy to erect, and not liable to get out of order. From 1 to 6 horse power.

Fig. 22.

GWYNNE AND CO.'S COMBINED STEAM-ENGINE AND PATENT CENTRIFUGAL PUMP.

Small and powerful, low in cost, economical in work. No skilled labour required. Inexpensive foundations. First Prize Medal awarded at Paris last year for this arrangement.

Fig. 114.



GWYNNE & CO.'S IMPROVED VERTICAL STEAM-ENGINE.

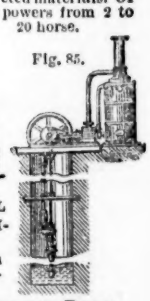
Occupies little space, compact, safe, and easy to work. Made from the very best selected materials. Of all powers from 2 to 20 horse.

Fig. 146.

GWYNNE & CO.'S IMPROVED HORIZONTAL HIGH-PRESSURE STEAM-ENGINE.

With or without expansion gear, for economical working. From 4 to 100 h. p.

Fig. 85.



GWYNNE & CO'S IMPROVED DEEP WELL PUMP.

Worked direct by steam-engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.

Large and fully Illustrated Catalogues sent on receipt of 12 postage stamps

TWELVE PRIZE MEDALS, taken at the Exhibitions of the Principal Cities of the World, TESTIFY TO THE GREAT EXCELLENCE OF THIS MACHINERY.

GWYNNE AND CO. have recently effected a considerable reduction in their prices, being determined to supply not only the BEST but the CHEAPEST PUMPING MACHINERY in the WORLD.

☞ TO PREVENT MISTAKES, PLEASE ADDRESS IN FULL—

GWYNNE AND CO.,
HYDRAULIC AND MECHANICAL ENGINEERS, ESSEX STREET WORKS, STRAND, LONDON, W.C.

THE WIRE TRAMWAY COMPANY
CONSTRUCT THEIR PATENT WAYS

TO CARRY FROM TWENTY TO TWO THOUSAND TONS PER DAY

AT THE FOLLOWING PRICES FOR TEN MILE LENGTHS:—

50 TONS PER DAY, IN HALF-HUNDREDWEIGHT BOXES.....	£250	0	0	PER MILE	Including rolling stock and steam power complete.
100 TONS PER DAY, IN ONE-HUNDREDWEIGHT BOXES	400	0	0	„	
1000 TONS PER DAY, IN SIX-HUNDREDWEIGHT BOXES.....	1500	0	0	„	

The prices of intermediate lines vary according to duty required.

A model may be seen at this office, and a line of three miles in daily work at Bardon Hill.

Small adaptations of this principle are provided for Factories, Gas and Water Companies, &c.

TIMES (Money Article).—"It seems probable this method will be found of considerable use in the development of the resources of new countries."

ENGINEER.—"It has been proved that the principle can be applied in practice; wire-rope railways are very inexpensive; they offer the only certain solution to hitherto insurmountable difficulties; and, lastly, the entire principle is correct."

MINING JOURNAL.—"The invention is one which will prove a great boon to a large number of mines, from the enormous extent to which it will lessen the cost of getting the ore to market."

HERAPATH'S RAILWAY JOURNAL.—"This rope railway supplies one of the greatest necessities of the age, and will provide easily and cheaply constructed feeders to our railways."

Full particulars, and descriptive prospectuses and estimates, may be obtained of—

21, GRESHAM STREET, OLD JEWRY, E.C.

M. BEALE, Secretary.

DAVIS AND PRIMROSE,
LEITH, N.B.,
STEAM HAMMERS,

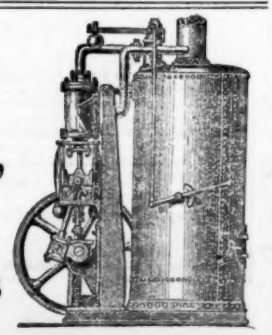
1¼ cwt., 3 cwts., and 5 cwts. sizes, always in stock or progress.

ENGINES AND BOILERS COMBINED,

From 2 to 20-horse power. Small sizes usually ready for delivery.

PUMPING AND WINDING ENGINES

CRANES, HOISTING MACHINERY, &c.



HEPBURNS' PUMP LEATHER WATERPROOF

By a special method of preparation, this leather is made solid, perfectly close in texture, and impermeable to water; it has, therefore, all the qualifications essential for pump buckets, and is the most durable material of which they can be made. It may be had of all dealers in leather, and of

I. AND T. HEPBURN AND SONS,

TANNERS AND CURRIERS, LEATHER MILLBAND AND HOSE PIPE MANUFACTURERS,

LONG LANE, SOUTHWARK, LONDON.

Prize Medals, 1851, 1855, 1862, for

MILLBANDS, HOSE, AND LEATHER FOR MACHINERY PURPOSES.

HEALTH AND MANLY VIGOUR.—A Medical Man, of Twenty Years' experience in the treatment of Nervous Debility, Spermatorrhœa, and other affections which are often acquired in early life, and unfit sufferers for marriage, and other social duties, has published a book giving the FULL BENEFIT of his LONG EXPERIENCE, GRATIS, with plain directions for the recovery of health and strength. A single copy sent to any address on receipt of one stamp.

Address to the "Secretary," Institute of Anatomy, Birmingham.

Just published, post free for three stamps.

MEDICAL FRIEND AND MARRIAGE GUIDE:

By Dr. WATSON (of the Lock Hospital), F.S.A., F.R.A.S., College of Physicians and Surgeons.

SELF-CURE OF NERVOUS AND PHYSICAL DEBILITY, Loss of Manhood, Impediments to Marriage, &c., SHOWING THE MEANS WHEREBY CERTAIN DISQUALIFICATIONS, which mar the happiness of Married Life, may be SPEEDILY REMOVED.

Consultations daily from 11 till 2, and 5 till 8; Sundays, 10 till 1.

Enclose three stamps, and address Dr. WATSON, No. 1, South-crescent, Bedford-square, London, W.C

Just published, post free for two stamps,

WONDERFUL MEDICAL DISCOVERY,

demonstrating the true causes of Nervous, Mental, and Physical Debility, lowness of Spirits, Indigestion, WANT OF ENERGY, PREMATURE DECLINE, with plain directions for PERFECT RESTORATION TO HEALTH AND VIGOUR WITHOUT MEDICINE.

Sent free on receipt of two stamps, by W. HILL, Esq., M.A., Berkeley House, South-crescent, Russell-square, London, W.C With innumerable illustrative cases in proof of the WONDROUS EFFICACY of the means employed.

WEST END STOCK, SHARE, AND INVESTMENT AGENCY.

PERMANENT OFFICE.
ADELPHI CHAMBERS, JOHN STREET, ADELPHI, W.C.

This AGENCY has every FACILITY for NEGOTIATING all BUSINESS in connection with Stock and Shares in Railways, Banks, Insurance, Gas, Mining, and Financial Companies.

LOANS GRANTED on STOCKS and SHARES.
References exchanged
Office hours, from 10 till 4.

F. LIMMER, Secretary.

MINE SHARES FOR SALE—
20 Chiverton.
10 Chiv. Moor, £3 12s 6d
5 Cook's Kitchen.
70 Drake Walls, 18s. 3d.
10 East Caradon.
20 East Chiverton, £1 5s
20 East Lovell, £7 10s.
50 Chontales, £1 9s.
100 Frontino.
25 Great South Tolgus.
60 Great So. Chiverton.
10 Great Vor, £16 18s.
5 Great Laxey, £19 10s.
150 New Lovell, £1 15s.
80 No. Treskerby, 15s.
25 No. W. Crofty, £1 2 6
90 Prince of Wales, 27s 9
150 Princess of Wales.
25 Redmoor, 6s. 9d.
35 Brynpostig.
50 So. Condurrow, £1 11 9
35 Tamar Valley.
5 Tincroft.
25 West Basset, £1 2s.
10 West Caradon.
50 W. Kitty (St. Agnes), £5 10s.
20 No. Chiverton, £1 0 6

SPECIAL BUSINESS in Alhambra, Holmbush and Kelly Bray United, South Merllyn, East Lovell, South Condurrow, Chiverton Moor, and Royalton.

Van shares have advanced to £34, as we predicted last week. Full particulars of the adjoining property can be had on application.

We call the special attention of our correspondents to a mineral property on the richest lead vein or lode in the kingdom. The shares of the neighbouring mine are marketable at £30 to £32, equal to £370,000 for the mine, and will go higher. Early application must be made, as the shares have already been bought at £1 premium.

CLIENTS having shares for sale or exchange may use this advertisement as a medium, by sending particulars not later than Thursday in each week.

Grand Prix (Gold Medal)—Paris Exhibition, 1867.

SHAFT SINKING
THROUGH WATER-BEARING UPPER STRATA,
WITHOUT USE OF PUMPING MACHINERY.

CHAUDRON'S PATENT SYSTEM is successful, even in cases previously abandoned on account of overpowering volumes of water.
EXPENDITURE REDUCED BY EIGHTY PER CENT.
No leakages, no repairs. Agents wanted.
HENRY SIMON, C.E., MANCHESTER.

THE FALCON CLIFF MINING COMPANY
(LIMITED), ISLE OF MAN.

Capital £30,000, in 6000 shares of £5 each,
Of which not more than £25,000 will, in the first instance, be issued
(With power to increase).
Deposit on application .... £1 per share.
On allotment .... 2 per share.
The remaining £2 per share in calls of £1 each, nine and eighteen months from date of allotment.

DIRECTORS.
HENRY KELSALL ASPINALL, Esq., Claughton, Cheshire.
JACOB GAITSKELL BROWN, Esq., Shipowner, Hartfield, Allerton, and Canning-place, Liverpool.
WALTER R. CRITCHLEY, Esq., St. Helens, Salwick Hall, near Preston, and Union Club, Manchester.
GEORGE DAWES, Esq., Ironmaster, Milton and Elsecar Iron Works, near Barnsley.
JOB TAYLOR, Esq., Colliery Proprietor, Mayor of Dudley.
Each of whom subscribes for not less than 100 shares as his qualification.

BANKERS.
Liverpool................ The Bank of Liverpool,
And Messrs. Glyn, Mills, and Co., London.
Isle of Man.............. The Isle of Man Banking Company (Limited).

SOLICITORS.
Messrs. ASPINALL and BIRD, 3, Union-court, Castle-street, Liverpool.

AUDITORS.
Messrs. J. S. and R. BLEASE, Lord-street, Liverpool.

SECRETARY—Mr. WILLIAM C. BEW.

REGISTERED OFFICES.
COLONIAL BUILDINGS, 36, DALE STREET, LIVERPOOL.

ABRIDGED PROSPECTUS.

The property of the Falcon Cliff Mining Company (Limited) comprises two very valuable mineral grants, or setts, in the parish of Rushen, Isle of Man, within two miles of the Port of St. Mary; and the entire length of the property is traversed by an excellent road, made by the Commissioners of Woods and Forests, leading directly to the harbour.

The setts (which are held under Crown leases for 21 years from October, 1866—renewable—at the usual Crown rents and royalties) contain nearly 1000 acres, and are about 2½ miles in length from north to south, and the operations already made have proved the existence in at least two distinct portions of the setts of the most valuable deposits of lead ore, in unusually favourable positions for speedy and comparatively inexpensive raising and dressing.

For full particulars the public are referred to the prospectus, from which it will be seen that the company at once enter upon two most valuable mines, either of which bids fair soon to rival the most profitable lead mines in the island (of which, and more particularly the Great Laxey Mines, the surveyors, whose reports are appended, are especially well qualified to speak), or in Wales.

Investors may rest assured that this company is not formed for any mere speculative object, but for the purpose of working legitimately a property which, honestly developed, cannot fail to yield a fortune to its possessors.

No promotion money will be paid.

The remuneration of the directors will be fixed by the shareholders in general meeting.

The purchase money to be paid by the company is £6000 in cash, and 800 shares paid up.

The Articles of Association, the Crown leases, and the surveyors' reports may be examined free of charge, at the offices of the solicitor to the company.

Prospectuses and forms of application can be had from the Bankers and Solicitors, and at the offices of the company.

NOTICE IS HEREBY GIVEN, that the LIST OF APPLICATIONS FOR SHARES will be CLOSED on the 29th of MAY, 1869.
WILLIAM C. BEW, Secretary.
Colonial-buildings, 36, Dale-street, Liverpool.

THE NEW PRINCE OF WALES SLATE COMPANY
(LIMITED).—By Acts 1862 and 1867.

Capital £50,000, in 10,000 shares of £5 each.
£1 per share to be paid on application, and £1 10s. on allotment.
Upwards of 5000 shares are already appropriated.

JOHN FRANCIS, Esq., Brynderwen, Bangor,—CHAIRMAN.
BANKERS—METROPOLITAN BANK (Limited), Cornhill.
SECRETARY AND GENERAL MANAGER—THOMAS HARVEY, Esq.
OFFICES.
ST. CLEMENT'S HOUSE, ST. CLEMENT'S LANE, E.C.

The directors are now prepared to receive applications for 2000 of the unappropriated shares on the terms above stated.

This is in no respect a speculation, but an established business, and a safe and profitable investment for capital. It may be confidently affirmed that no slate quarry was ever offered to the public under such favourable circumstances, and the directors invite those who are not already aware of its high position to investigate its merits.

The slate is known throughout the kingdom, and is distinguished for every excellence of colour, purity, lightness, and strength, and is unsurpassed in any respect by any other slate in the Principality. The quarry has already produced several thousand pounds worth of slate, is in full working order, and is amply provided with every requisite in plant and machinery for carrying on the most extensive business. Slabs, of which there are thousands now on the quarry, can be supplied to any extent. The buildings and sawing and planing machinery are in perfect order, and of the best and most improved description.

Less than £2000 will now complete the incline, and bring the quarry into a large monthly profit. The local manager states that slates and slabs of the value of £500 per month can be immediately produced, and the production can be rapidly extended, as the quarry is yet only in its infancy.

Eight galleries, each 18 yards in depth, have been opened, and can be worked to an extreme depth of 300 yards without any lifting power whatever. The tip for rubbish is unlimited—in fact, it is not too much to say that, considered in all its aspects, no such quarry has been opened in Wales during the present century. There is abundance of water power for sawing and planing. The slates have been shipped, or sent by rail from Carnarvon to all parts.

Two of the directors represent the largest quarries in Wales, and, together with the general manager, hold between them nearly 2000 shares in this quarry. All rents and royalties have been purchased by the company. The property is upwards of a mile square, and is held on a lease for 40 years, granted by G. A. Huddart, Esq. By agreement, dated 14th September, 1868, between F. B. Smart and H. L. Hammack, and the company, paid-up shares are to be given as a full consideration for the purchase of the entire property.

There are barracks, provided with beds, stoves, and every requisite for the accommodation of 100 men.

Applications for forms, prospectuses, and shares (the latter accompanied by a cheque for the deposit) may be addressed to the Secretary, at the offices, St. Clement's House, St. Clement's-lane, London, E.C.

The 2000 shares will be allotted according to priority of application.

There are also, in a distant part of the property, other large beds of equally fine slate rock, which can be leased or sold. The sum of £5000, and a royalty of 1-15th, are also receivable by the company for a copper mine lately sold by them.

FINAL NOTICE.
NEW ZEALAND QUARTZ CRUSHING AND GOLD MINING COMPANY (LIMITED).

The SHARE LIST of this company will CLOSE for TOWN on MONDAY, the 24th, and for the COUNTRY on TUESDAY, the 25th instant.

Meantime prospectuses, &c., can be be had by applying to the brokers, Messrs. POWER and DAVIS, or to the Secretary, 28, Moorgate-street, City.
JOSEPH SIMPSON, Secretary.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid
1500	Alderley Edge, c, Cheshire*	10 0 0	—		10 6 8	0 5 0	Jan. 1869
200	Botallack, t. c, St. Just	91 5 0	250	250 255	544 5 0	16 0 0	May 1869
4000	Brookwood, c, Buckfastleigh	1 11 0	—		0 12 6	0 2 6	Aug. 1868
1000	Bronfloyd, l, Cardigan*	12 0 0	19½	19½	11 9 0	0 12 0	April 1869
5094	Bwlch Consols, s-l, Cardigan	4 0 0	—		0 5 0	0 5 0	June 1868
6400	Cashwell, l, Cumberland*	2 10 0	2		0 3 0	0 1 6	Aug. 1868
916	Cargoll, s-l, Newlyn	15 5 7	—		16 5 0	0 10 0	April 1869
1280	Chanticleer, l, Flint	0 7 8	—		0 1 0	0 0 6	Nov. 1868
2450	Cook's Kitchen, c, Illogan‡	19 14 9	14	12⅛ 13⅛	2 4 6	0 7 6	April 1869
509	Creegbrawse and Penkevil, t	--	—		2 5 0	1 5 0	April 1868
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		30 3 0	0 10 0	April 1869
128	Cwmystwith, l, Cardiganshire	60 0 0	—		385 10 0	2 0 0	Feb. 1869
280	Derwent Mines, s-l, Durham	300 0 0	—		177 0 0	2 10 0	July 1868
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	240	190 210	1132 0 0	4 0 0	May 18 9
656	Ding Dong, t, Gulval‡	49 14 6	—	24 25	2 0 0	1 10 0	Mar. 1869
358	Dolcoath, c, t, Camborne	128 17 6	—	450 475	884 10 0	10 0 0	April 1869
6144	East Caradon, c, St. Cleer†	2 14 6	7¼	7 7¼	14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		166 10 0	2 0 0	Mar. 1869
6400	East Pool, t, c, Pool, Illogan	0 9 9	—		9 3 0	0 3 3	May 1869
1906	East Wheal Lovell, t, Wendron	3 9 0	8	5¾ 6¼	4 11 6	0 10 0	Jan. 1869
2800	Foxdale, l, Isle of Man*	25 0 0	—		73 0 0	0 10 0	April 1869
5000	Frank Mills, l, Christow	3 18 6	4⅛	4 4¼	3 13 6	0 4 0	April 1869
3950	Gawton, c, Tavistock	3 10 6	—		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	19½	19 19½	10 5 0	0 10 0	Mar. 1869
3000	Great Northern Manganese*	5 0 0	—		—	5 p.ct.	Feb. 1869
5908	Great Wheal Vor, t, c, Helston†	40 0 0	18	16½ 17½	14 1 0	0 5 0	Mar. 1869
1024	Herodsfoot, l, near Liskeard†	8 10 0	46	44 46	49 10 0	1 10 0	Feb. 1869
165	Levant, c, t, St. Just	10 8 1	—		1099 0 0	4 0 0	Jan. 1869
400	Lisburne, l, Cardiganshire	18 15 0	—		515 0 0	3 0 0	Mar. 1869
3000	Maes-y-Safn, l, Flint*	20 0 0	—		4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, c, Caradon	4 10 6	9	8 8½	5 4 0	0 5 0	April 1869
3000	Minera Boundary, l, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co. l, Wrexham*	25 0 0	170	170	253 13 6	5 0 0	May 1869
20000	Mining Co. of Ireland, c, l, cl.	7 0 0	11		—	9 p.ct.	July 1868
40000	Mwyndy Iron Ore*†	3 5 0	1	⅞ 1⅛	0 11 6	0 3 0	Feb. 1869
2000	North Levant, t, c, St. Just	10 12 0	12		0 5 0	0 5 0	Mar. 1869
200	Parys Mines, c, Anglesey*	50 0 0	—		162 10 0	2 10 0	Aug. 1869
5000	Penhalls, t, St. Agnes	3 0 0	—		0 6 6	0 4 0	April 1869
12800	Prince of Wales, c, Calstock	0 12 6	1¾	1⅜ 1⅛	0 8 6	0 1 0	Nov. 1868
1120	Providence, t, Uny Lelant†	10 6 7	37	32 33	88 2 6	1 10 0	Mar. 1869
512	South Caradon, c, St. Cleer†	1 5 0	—		612 10 0	5 0 0	Mar. 1869
6000	South Darren, l, Cardigan*	3 6 6	—		0 14 6	0 1 6	Feb. 1869
937	South Wh. Crofty, c, Illogan	24 10 1 0.	—		1 10 0	0 10 0	Feb. 1869
496	So. Wh. Frances, c, Illog.†‡	18 18 9	18	15 16	374 13 6	1 0 0	Mar. 1868
940	St. Ives Consols, t, St. Ives‡	10 15 0	17⅛	18 19	0 10 0	0 10 0	May 1869
508	Summer Hill, l, Mold	3 18 6	—		2 5 6	0 5 0	Feb. 1868
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	18½	17½ 18	20 11 0	0 10 0	Mar. 1869
2000	Trumpet Cons., t, Helston	11 10 0	—		8 14 0	0 14 0	April 1869
12000	Van, l, Llanidloes*	4 5 0	27	32¼ 33½	—	—	
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	50	49 51	33 7 6	2 0 0	Feb. 1869
5000	West Godolphin, t, c, Breage	0 1 0	—		0 2 0	0 2 0	Dec. 1867
512	West Wheal Frances, t, Illogan	106 15 0	—	50 52½	1 10 0	1 10 0	April 1869
400	W. Wheal Seton, c, Camborne†	47 0 0	177½	170 180	628 0 0	6 0 0	April 1869
512	Wheal Basset, c, Illogan†	5 2 6	—	60 65	632 10 0	1 0 0	June 1868
1024	Wheal Friendship, c, Tavistock.	20 0 0	—		300 10 0	0 10 0	Nov. 1866
512	Wheal Jane, s-l, Kea	10 15 0	50	44 46	23 0 0	2 0 0	Mar. 1869
4295	Wheal Kitty, t, St. Agnes	5 4 6	5⅛	5 5⅛	3 18 0	0 5 0	May 1869
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	15	13½ 14½	67 15 0	0 17 6	Mar. 1869
80	Wheal Owles, t, St. Just‡	70 0 0	275		403 3 0	52 10 0	Feb. 1869
396	Wheal Seton, t, c, Camborne	58 10 0	62½	55 60	254 15 0	2 0 0	Feb. 1868
3000	Whitewell Lead, Clitheroe*	0 5 0	—		1 0 0	0 10 0	Dec. 1867
17000	Wicklow, c, t, Wicklow	2 10 0	11		49 6 0	0 5 0	Mar. 1869

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid
35000	Alamillos, l, Spain*†	2 0 0	1¾	1¼ 1¾	0 6 6	0 2 0	Mar. 1869
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 6	0 0 6	Aug. 1868
15000	Cape Copper Mining*†	7 0 0	—		3 17 6	0 15 0	Nov. 1868
30000	Central American Association*†	1 10 0	—		—	—	
10000	Copiapo Mining Co., Chili†‡	16 10 0	3½	2 3	0 4 0	0 4 0	April 1869
76162	Don Pedro North del Rey*†‡	0 14 0	5½	4¾ 5	1 0 3	0 6 0	Mar. 1869
70000	English and Australian, c‡	2 10 0	—			0 0 9	Feb. 1869
25000	Fortuna, l, Spain*†	2 0 0	2¼	1¾ 2¼	1 14 10	0 3 0	Mar. 1869
20000	Gen. Mining Assoc., Nova Scotia†	20 0 0	—		23 10 0	0 15 0	June 1867
10000	Gonnesa, l, Sardinia*	5 0 0	—		10 per cent.		Aug. 1868
68000	Kapunda Mining Co., Austra†‡	1 0 0	⅜	¼ ⅜	0 1 10	0 0 6	Nov. 1868
15000	Linares, t, Spain*†	3 0 0	3	2½ 3	11 18 4	0 3 4	Mar. 1869
50000	Panulcillo, c, Chili*†	3 0 0	1	½ 1	10 per cent.		Yearly.
6000	Peel River Land and Mineral*†	100 0 0	—		—	—	
10000	Pontgibaud, s-l, France†	20 0 0	13	12 14	5 6 2	0 19 7	Dec. 1868
100000	Port Phillip, g, Clunes*†	1 0 0	2	1⅝ 1⅞	1 3 6	0 1 6	Jan. 1869
120000	Scottish Australian Min. Co.†	1 0 0	1⅛		10 per cent.		Nov. 1868
11000	St. John del Rey, Brazil*†	15 0 0	16½	15½ 16	81 10 0	4 5 0	Dec. 1867
4000	Swedish Sulphur Ore*	2 10 0	—		7½ per cent.		Dec. 1868
13500	Vancouver Coal Mining*†‡	6 0 0	8¾	7¾ 8¼	2 14 6	0 12 0	May 1869
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 7	0 0 7	July 1868
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, g, s, Argentine Republic*	1 0 0	—	1⅛	
100000	Anglo-Brazilian, g*†	0 11 0	—	⅜ ½	Nov. 1866
12500	Anglo-Italian, g*†	0 15 0	¾	¾ 1	Jan. 1868
20000	Australian United, g	1 0 0	—		Mar. 1868
2464	Burra Burra, c, South Australia‡	5 0 0	—		
20000	Capula, s, Mexico*†	1 17 6	—		May 1868
30000	Chontales, g, s, Nicaragua*†	5 0 0	1⅛	1⅜ 1½	Mar. 1868
12000	Cobre Copper Company, c, Cuba†‡*	45 10 0	—		Jan. 1868
10000	Copiapo Smelting, Chili*	10 0 0	—	2 3	April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 17 0	1	¾ ⅞	May 1868
150000	General Brazilian*	0 10 0	⅞	⅝ ¾	Feb. 1869
80000	Great Northern, c, South Australia†	1 11 6	—		Sept. 1862
50000	Javali, g, Nicaragua	2 0 0	—		Jan. 1869
7927	Lusitanian (Portugal)†‡	2 15 0	½	½	Dec. 1866
83640	Mariquita, g, s, New Granada	1 0 0	—		Feb. 1868
12500	Nerbudda Coal and Iron, India*†	6 0 0	—		Dec. 1867
51000	New Quebrada, c, Venezuela*†	4 4 0	—		
80000	Pestarena United, g, Italy*†	2 17 6	1¼	1 1½	
10178	Rhenish Consolidated, l [6000 £5 pd., 4178 £2 10s. pd.]	—	—		May 1866
100000	Rossa Grande, g, Brazil*†	0 14 0	1¼	¾ 1	June 1867
15000	San Pedro del Monte, s, Mexico*	4 0 0	—		Sept. 1866
10000	San Roque, l, Spain	5 0 0	—		Fully pd.
50000	Sao Vicente, Brazil*†	0 4 0	⅜	⅛ ⅜	Oct. 1868
100000	Taquaril, g, Brazil*	0 7 6	½	⅜ ⅝	Oct. 1868
43174	United Mexican, s, Mexico†‡*	28 5 2	—		May 1868
30000	Val Antigoria, g, Italy*	1 2 6	—		
6000	Val Sassam, s, c, l, Italy*†	8 0 0	—		Aug. 1868
45000	Victor Emanuel, c, Italy*	1 0 0	—		Fully pd.
20000	Washoe, g, Nevada†	5 0 0	—		Fully pd.
80000	Worthing, c, South Australia*†	1 0 0	⅜	⅛ ⅜	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	¼	⅛ ¼	Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	1⅝	1½ 1⅝	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
12000	Brynpostig, Montgomery, l*	1 0 0	2	2¼ 2¾	
1000	Carn Brea, c, t, Illogan‡	30 0 0	21		June 1868
3000	Chiverton, l, Perranzabuloe	11 0 0	2⅝	2⅜ 2⅝	Nov. 1868
3000	Chiverton Moor, l, Perranzabuloe	7 0 6	4	3½ 3¾	Feb. 1869
3880	Clifford Amalgamated, c, Gwennap‡	40 17 6	—		Oct. 1868
12800	Drake Walls, t, Calstock‡	2 10 0	1	⅞ 1	Jan. 1868
512	East Basset, c, Redruth†‡	37 0 0	8	7½ 8½	Nov. 1868
6000	East Carn Brea, c, Redruth‡	4 18 0	⅝	⅝ ¾	April 1869
6000	East Grenville, c, Camborne	4 5 0	4½	4½ 4¾	May 1869
4000	East Wheal Russell, c, Tavistock†	13 13 6	—		Oct. 1868
6144	Gonamena, c, St. Cleer	7 15 3	—		April 1869
5000	Great North Downs, c, Redruth	6 13 0	2¼	2 2¼	Feb. 1867
4800	Great Retallack, s-l, b, Perranzabuloe	2 19 6	—		Oct. 1868
5143	Great South Tolgus, c, Redruth	1 10 6	1½	1⅛	Dec. 1868
1798	Great Wheal Fortune, t, Breage	31 7 4	—		Mar. 1868
6000	Hingston Down, c, Calstock†	5 12 0	—		Dec. 1868
400	New Wheal Seton, c, Camborne	65 5 0	57½	60 70	April 1869
3457	North Downs, c, Redruth	5 12 10	—		Mar. 1869
695	North Roskear, c, Camborne	61 19 0	—	6½ 7	Jan. 1869
5936	North Treskerby, c, St. Agnes	1 18 10	⅞	⅝ ¾	Feb. 1869
1024	Rose and Chiverton United, l, Newlyn	7 0 0	—		May 1869
6138	South Condurrow, t, c, Camborne	4 10 6	1⅝	1½ 1¾	Feb. 1869
1000	South Merllyn, l, Flint	1 0 0	—		
920	Stray Park, c, t, Camborne†‡	46 19 8	7	5 7	April 1869
6000	West Basset, c, Illogan†‡	2 0 0	—	⅞ 1⅛	May 1868
1024	West Caradon, c, St. Cleer‡‡	27 0 0	5¼		Mar. 1869
2582	West Great Work, t, Breage	5 11 0	—	3¼ 3½	June 1866
3535	West St. Ives, t, c, St. Ives	0 6 0	—		Mar. 1869
5000	West Wheal Kitty, t, St. Agnes	3 12 0	¾		May 1869
6000	Wheal Agar, c, Illogan	7 18 0	1⅛		Mar. 1889
512	Wheal Buller, c, Redruth†‡	30 10 0	16	14 16	May 1869
811	Wheal Emily Henrietta, c, Illogan	20 15 0	—		Jan. 1867
5724	Wheal Grenville, c, Camborne†	10 10 0	2⅛	2 2⅛	Dec. 1868
1040	Wheal Trelawny, s-l, Liskeard†	10 17 0	—	7 9	Mar. 1869
4096	Wheal Uny, t, c, Redruth	10 14 6	3⅛	3½ 3¾	Oct. 1868

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.
4000	Ballacorkish, I. of Man, l, c*	4 10 0	—	
4000	Bedford Consols, c, Tavistock	3 0 6	⅞	¾ ⅞
4000	Bedford United, c, Tavist.*	3 1 8	2⅛	2 2⅛
5000	Blue Hills, t, c, St. Agnes	0 5 0	—	
1248	Boscaswell, t, c, St. Just	7 6 0	—	
5000	Bottle Hill, t, Plympton	1 14 6	—	
12000	Bradda, c, l, Isle of Man*	1 10 0	—	
5000	Bryn Gwiog, l, Flint	0 18 0	—	
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—	
7500	Brynystwith, l*	2 0 0	2⅛	1¾ 2
1000	Budnick Consols, t	2 14 0	—	
6000	Bwadrain Cons., s-l, Cardig.	3 5 0	—	
30000	Caldbeck Fells, l, Cumberld.*	1 15 0	—	
1000	Camborne Consols, c	11 10 0	—	
11000	Cape Cornwall, t, c* [8000 £2 10s. pd., 3000 25s. pd.]			
5000	Capel Banhaglog, l, Mont.*	2 0 0	2⅛	2⅛ 2⅜
914	Caradon Consols, c, St. Cleer	33 6 0	—	
6000	Carn Camborne, c, Cambrn.	2 12 0	—	
20000	Carysfort [3200 £2¼ pd., 16800 £1 ½ pd.]			
3000	Chiverton Valley, l, Perranz.	2 0 0	—	
2048	Colquite & Callington Un., c.	1 11 0	3½	
256	Condurrow, c, t, Camborne‡	76 10 0	—	
50000	Connorree, c, sul, Wicklow*.	1 0 0	¼	
983	Copper Hill, c, Redruth‡	12 10 0	—	
1000	Cornwall Hematite*	5 0 0	—	
1055	Craddock Moor, c, St. Cleer‡	14 12 0	—	
6000	Cuddra, t, St. Austell	5 10 0	—	
300	Cwm Darren, Cardigan*	—	—	
1000	Deep Level, s-l, Holywell	30 0 0	—	
4000	Devon & Cornwall United	5 18 0	—	
5000	Dolwen, l, Cardiganshire	0 10 0	—	
1000	East Basset and Grylls, t	3 5 0	9	
4000	East Chiverton, l, Perranz.	3 7 9	1½	
4000	E. Gunnislake & S. Bed. c.	11 1 6	—	
6000	East Laxey, l, Isle of Man	3 0 0	—	
4096	E. New Wh. Lovell, t, Wend.	0 5 0	—	
3928	East Providence, t, Lelant	5 4 9	1	
5000	E. Rosewarne, c, t, Gwinear	2 19 0	—	
6000	East Snaefell, l, I. of Man*	3 0 0	—	
5610	East Seton, c, Camborne	0 16 6	—	
2000	East Trumpet, c, t	1 15 0	—	
6000	East Wheal Reeth	0 2 0	—	1⅜ 1⅛
6000	Ebury Lead Min. Co., Flint*	2 10 0	—	
5000	Exmouth, s-l, Christow	0 3 6	—	
6000	Gen. Min. Co. for Ireland, c.	5 10 0	—	
40000	Glasgow Caradon, c* [30,000 £1 p., 10,000 15s. p.]			
10000	Glan Alun, l, Mold*	0 16 0	—	
5700	Goginan, Cardigan, l	12 10 0	—	
2866	Great Caradon, c, St. Ive	4 5 9	—	
12500	Gt. No. Laxey (Isle of Man)*	1 0 0	1¼	1
6000	Great N. Tolgus, c, Illogan	1 0 0	—	
15000	Great Rhosesmor, l	5 0 0	—	
4096	Great Royalton, t	0 7 6	1	1
6000	Gt. S. Chiverton, s-l, Perranz	2 0 0	2¼	
6000	Great Western, t	2 0 0	—	
3313	Gt. Wh. Baddern, t, Devoran	7 17 6	—	
119	Great Work, t, Germoe	100 0 0	—	
1024	Gunnislake (Clitters'), t, c.	4 19 0	—	
6000	Gwydyr Park, l, Llanrwst	1 12 0	—	
12000	Holmbush and Kelly Bray, c*	1 0 0	4¼	4 4½
5000	Ironmasters' Company*	10 0 0	—	
1019	Leeds and St. Aubyn, t, c	19 13 4	—	
1000	Llywernog, l, Cardiganshire	13 0 0	9⅝	
5120	Lovell Consols, Wendron, t.	0 6 0	1¼	
6000	Maudlin, c, Lostwithiel	4 7 0	—	
6000	Mid-Wales, l,*	2 10 0	2	2¾ 3¼
4662	Minera Union, l [2500 £4 p., 2162 £2 7s. 6d. p.]			3 3½
1000	Montgomeryshire, l, b*	4 0 0	—	
640	Mount Pleasant, l, Mold	4 0 0	—	
1024	Nangiles, t, c, Kea	31 12 0	—	
1500	New Chiverton, l, Perranz.	1 4 6	⅞	
6000	New Clifford, c., Gwennap*.	3 5 0	—	
6250	N. Crow Hill, l, St. Stephen.	3 11 0	—	
6514	New E. Russell, c, Tavistock	0 12 6	—	
20000	New Gt. Cons., c, Tavistock*	1 0 0	—	
6400	New Pembroke, St. Blaz. t, c	1 17 0	—	
3425	New Treleigh	6 10 0	—	
6000	New Westminster, l	6 10 0	—	
4096	New Wh. Lovell, t, Wendron	1 19 6	2¼	1½ 2
4000	N. Wh. Prosper, t, St. Hilary	0 2 6	—	1 1¼
2000	N. Wh. Towan, c, t, Wendron	1 10 0	—	
5000	No. Dolcoath, c, Camborne	4 3 0	—	
1361	No. Grambler, c, Redruth	9 3 9	—	
6000	North Jane, t, s-l, Kenwyn	3 7 6	—	
4000	No. Phœnix, c, Linkinhorne	4 11 0	—	
3240	North Pool, c, Illogan	6 13 6	—	⅞ 1
1000	North Retallack	2 0 0	—	3¼ 3½
6000	North Wheal Basset, c, t†	5 0 0	—	
3000	N. Wh. Chiverton, l, Perran.	5 0 0	—	
5610	N. Wh. Crofty, c, Illogan†	3 11 3	1⅛	1
12288	Okel Tor, c, Calstock	2 7 4	—	
8000	Old Gunnislake, c, Calstock	3 9 6	—	
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
5754	Pedn-an-drea, t, Redruth	8 1 6	—	
	Pendarves United	—	—	1⅛ 1⅜
5000	Pendeen Consols, c, St. Just	7 17 0	—	
4000	Penhale United, s-l*	4 10 0	—	
2177	Penhale Wh. Vor, t, c, Breage	7 2 6	—	
6000	Perran Wheal Vyvyan	0 5 0	¼	¼ ⅛
3000	Pickard's Down, s-l, Brnstpl.	0 1 6	¼	
1772	Polberro, t, St. Agnes	15 0 0	—	
12800	Princess of Wales, c, t	0 7 0	⅜	¼
6000	Prosper U., t, c, St. Hilary	9 14 0	—	
4620	Redmoor, c, t, Callington	2 1 0	½	
6000	Reinnie Laxey, l, I. of Man*	4 10 0	—	
6000	Roaring Water, c*	2 15 0	—	
2000	Rosecliff and Tolcarne, l*	9 15 0	—	
5905	Rosewall Hill & Ransom, t‡	4 0 0	1½	1½ 1⅜
10000	Royalton, t, St. Columb	1 1 0	—	
20500	Snaefell, l, Isle of Man*	1 0 0	—	¾
512	South Basset, c, Gwennap	30 10 0	—	
5000	South Carn Brea, c, t	0 5 0	—	
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
5000	So. Gt. Work, t, c, St. Hilary	0 2 6	—	
6000	South Grenville, c	0 2 0	—	
3395	So. Herodsfoot, l, Liskeard	4 13 0	1	
400	So. Wh. Seton, c, Camborne	87 3 0	—	
242	Spearne Moor, t, St. Just	6 2 0	—	
673	St. Ives Wh. Allen, t, St. Ives	18 18 7	—	
8771	St. Just Amalg., t,* [6000 £3 10s. pd., 2771 £2 5s. pd.]			
300	Steeple Aston Iron Ore Co.	10 0 0	—	
7000	Stiperstones, l, Salop*	6 0 0	—	
6000	Tamar Valley, s-l, Beeralston	0 18 0	—	
3500	Tin Hill, t, St. Austell	1 12 0	—	
6000	Tin Valley, St. Neot	1 0 0	1⅜	
548	Trelyon Consols, t, St. Ives	16 10 0	—	
501	Tresavean and Trethurrup	16 11 0	6¾	
4096	Trewetha, s-l, Menheniot	10 19 6	—	
1943	Treworlis, t, Wendron	11 15 4	—	
70	Tygwyn, s-l, Cardigan	25 0 0	—	25
1000	Vaughan, s-l, Cardigan	1 0 0	—	1 1⅛
7664	Vigra and Clogau, c, Dolg.*‡	5 0 0	—	
1000	West Cwm Erfin, s-l	0 10 0	—	½ ⅝
256	West Damsel, c, Gwennap	38 10 0	—	
12800	W. Drake Walls, c, Calstock	0 8 6	—	⅛
12000	W. Maria & Fortes., c, Lam.	3 13 0	—	
12800	West Prince of Wales, c	0 11 0	—	
838	West Rose Down, c, Linking.	23 0 0	—	
512	West Tolgus, c, Redruth	62 0 0	—	
4096	W. Wh. Tremayne, St. Erth	0 14 0	—	
741	Wheal Basset and Grylls, t.	7 18 6	9	7 8
5368	Wheal Crebor, c, Tavistock	2 8 6	⅝	½ ⅝
4000	Wh. Emma, c, Buckfastleigh	3 19 0	—	
1560	Wheal Falmouth & Sperries	3 1 0	—	
3700	Wheal Ida, s-l, St. Ive	1 9 6	—	
1024	Wh. Kitty, t, Uny Lelant†	3 10 6	—	
896	Wh. Margaret, t, Uny Le.‡	13 17 6	8	7 8
728	Wheal Margery, St. Ives, t, c	27 4 0	—	
6000	Wheal Mary Florence, c*	2 10 0	—	
1000	Wh. Mary Hutchins, Plymp.	2 12 6	—	
2000	Wheal Rose, c, Scorrier	1 10 0	—	
4663	Wheal Sparnon, c	3 17 0	—	
1920	Wh. Trannack, c, Sithney	1 13 3	—	
1200	Wheal Trevenna, t, c*	10 0 0	—	

IRON AND COAL COMPANIES.

Shares.	Company	Paid.	Last Pr.	Bus. done.
100	Bolckow, Vaughan, and Co.*	30 0 0	—	39 41
100	Brown, John, and Co.*	70 0 0	—	46 48
100	Charles Cammell and Co.*	80 0 0	—	49 50
10	Consett Iron Company*	7 10 0	—	8¼ 8⅝
32	Ebbw Vale Iron Co.*	27 10 0	—	16 16½
15	Hopkins, Gilkes, and Co.*	10 0 0	—	8 9
12½	Mersey Steel and Iron Co.*	11 10 0	—	3 3⅛
10	Midland Iron Company*	5 0 0	—	12¼ 12¾
100	Parkgate Iron Company*	57 10 0	—	24½ 25
20	Patent Shaft & Axletree Co.*	10 0 0	—	15⅛ 15⅝
50	Rhymney Iron Company	50 0 0	—	27½ 28½
15	Ditto, New	15 0 0	—	8½ 8¾
100	Sheepbridge Coal & Iron Co.*	50 0 0	—	29½ 30
100	Staveley Coal and Iron Co.*	60 0 0	—	90½ 91
100	Thames Iron Company*	100 0 0	—	30 —

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl, slate; sl, silver-lead; t, tin; z, zinc.

, Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

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